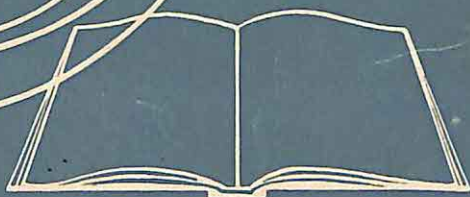


C. L. KAPUR



RADIO **IN** **SCHOOL** **EDUCATION**



MINISTRY OF EDUCATION GOVERNMENT OF INDIA

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RADIO IN SCHOOL EDUCATION

C. L. KAPUR



MINISTRY OF EDUCATION
GOVERNMENT OF INDIA

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PREFACE

This little book studies the problems and the instructional potential of broadcasts to schools. It summarises the work of A.I.R. in this field and outlines the use that is being made, and may yet be made of the service by the listening schools.

C. L. KAPUR

Akashvani Bhavan
Parliament Street,
New Delhi.

September 28, 1959

1236

“Radio and television have created a new medium of education which we have not yet fully utilized. Like the printing press, radio and television also work a revolutionary advance in educational practice. If we can fully utilize radio and television, we can effect very great changes in our schools. The best teachers of the country can reach far wider numbers than is possible today. Lectures and books can be largely supplemented by radio, though there should be no question of the one supplanting the other. There is, after all, no substitute for a really good teacher, but just as books have been an aid to him, radio and television can also become his useful instruments.”

Maulana Abul Kalam Azad

“In short, radio and television provide the classroom with windows on the world, with magic carpets that transport pupils to other lands, to other sections of their own land, and to new and different climates of opinion and culture.”

Levenson

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INTRODUCTION

In India, school broadcasting is still struggling to gain a toehold in education. The problem is complicated by economic stringency, by long distances and by the number and variety of regional languages. All the same, broadcasts to schools are being put out in more than a dozen languages from twenty-one stations. And, still there are areas (notably Jammu and Kashmir and Orissa) which have no school broadcasting so far. The service, in the past, has been and continues to be largely regional, there being no centrally produced national programmes for the whole country. Till a little over three years ago, there was no co-ordinating authority at the Directorate nor was there any system of exchange, or 'repeat' programmes.

The changing pattern of education demands reorganization of resources and revitalisation of traditional methods. A good school broadcast can give the teacher, through its matter and the freshness of its presentation, an additional means of developing his own effort, and a greater incentive to sustained thought about his craft. The benefits to the students are numerous. Among them are a new joy in learning, increased knowledge, a greater command of vocabulary, capacity for more concentrated and more critical listening, and increased fluency and confidence in speech and discussion.

The radio is not simply a mechanical device, adding merely to the reach and dissemination of the human voice, and creating opportunity for the teacher to speak to classes in schools other than the one he is working in. It is much more. It can, in fact, claim to bring about a new development in educational method and practice. Educational programmes emphasise the social relevance of knowledge. They mitigate, in some measure, the defects of compartmental study of subjects. The conventional curriculum is organised around a systematic array of subject-matter, neatly divided and sub-divided into heads and sub-heads. No thinking teacher will ever claim or concede that this is anything more than a convenience. But, this division can, sometimes, lead to the stressing of artificial distinction.

School broadcasts are devised to counteract and mitigate this tendency. The broadcast is usually worked round real-life situations and draws upon related and interrelated areas of knowledge to build up learning situations in the context of everyday experience of the listener.

The purpose of this brochure is to help the listening schools to organize listening and to utilise broadcasts to achieve educational results. It cannot be claimed that every broadcast conforms strictly to canons of good broadcasting, but with increasing awareness of the value of broadcasts and with the growth and inflow of helpful criticism, the service is sure to improve. Broadcasts are sure to find a place in instructional procedures of our schools in the not-too-distant a future.

Among other things, school broadcasting should help pulverize one of the toughest educational problems, *viz.*, that of curriculum construction. Syllabuses and lists of topics produced by high power committees often prove empty and confusing. Their content is left to be determined and developed by the writers of textbooks, the teacher and, in some measure, the examiner, none of whom had possibly a hand in drawing up the syllabuses. School broadcasts, on the other hand, not only select topics but develop them into communicable pieces of knowledge with thought for their psychological aptness and educational value. Thus, they provide at once the syllabus, the text and the basis for discussion and learning, as also for testing assimilation. And, the intelligent follow-up by the teacher, makes them a useful starting point for classroom projects and activities.

School broadcasting is an expanding, developing medium. It is young. Its faults are remediable, its classroom limitations are surmountable and temporary—its promise and educational potential limitless. School broadcasts properly planned and utilised should raise standards of taste, increase the range of valuable information and guide and stimulate creative activity among the listeners.

Whether you regard the radio as an aid or as a new-fangled fad of the so-called progressives, you cannot escape it. You may like it or not, but it is on you. It is, therefore, wise to study its possibilities and to exploit its educational potential, rather than allow it to fall into other

hands and to let it become a distraction or a source of entertainment or merely a background hum to the picture of 'refined living'.

In planning educational programmes, A.I.R. studies and takes into account educational trends and policies, and maintains, through consultative panels, a live and continuous contact with the educational world. Syllabuses are kept in view in preparing schedules. Suggestions and constructive criticism by listening schools and by teachers guiding listening are eagerly sought and are invariably incorporated in future programme schedules.

The book has been written at the instance of the Ministry of Education, Government of India and owes much to discussions with Shri K. G. Saiyidain, Educational Adviser to the Government, and Shri J. C. Mathur, Director General, A.I.R., whose interest in education is as great as his love for the radio. Shri Mathur very kindly read through the manuscript and offered many valuable suggestions which have been incorporated. To some extent, it has involved re-writing, and consequent delay in its publication.

CHAPTER I

THE CHANGING PATTERN OF EDUCATION AND BROADCASTS TO SCHOOLS

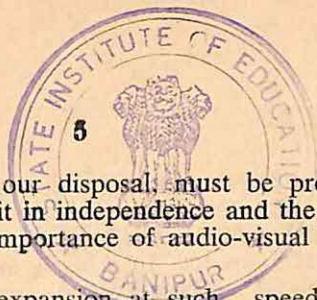
Education in the New Set-up

Democracy needs for its sustenance not only a trained bureaucracy, but informed and instructed public opinion. It needs alert minds capable of sharing civic and political responsibilities and making a contribution to the understanding and solution of social problems and economic puzzles. Universal suffrage without universal education is already putting a heavy strain on the democratic machinery. Only education of the masses can give life and meaning to democratic ideals and institutions. And, if the pace of mass education must be quickened, mass media of communication will have to be pressed into service. Schools and colleges and universities alone will not be able to achieve it, by sticking to traditional methods.

The Changing Pattern of Education

Our country is passing through rapid and momentous changes, and our educational system and techniques must keep pace with them. They must prepare themselves to meet new challenges. Schools are, no doubt, growing, both in size and number. Even small villages, with sparse population, now have schools. And, most schools are overcrowded! They have long waiting lists. The fact is that education is no longer the preserve of the privileged few. It is a right guaranteed by the Indian Constitution, which, among other things, envisages schooling for all children up to the age of fourteen. Complete liquidation of illiteracy, provision of free Primary education for all, and diversified Secondary courses to cater for different aptitudes, are immediate objectives of educational policy.

The aims of education, the content of curricula and courses, the media and techniques of instruction and the systems of evaluation and examination are being subjected to close scrutiny. Traditional methods of learning and teaching are becoming inadequate, if not obsolete. Old equipment is fast becoming out-of-date. New aids that



science has placed at our disposal, must be pressed into service for tasks implicit in independence and the democratic way of life. The importance of audio-visual aids must be clearly apprehended.

With change and expansion at such speed, there is danger of standards of efficiency both in personnel and equipment, going down. We are faced with shortages all round—shortage of apparatus, of equipment and, above all, shortage of trained personnel, capable of sizing up to the new tasks. We need aids and equipment, which, luckily for us, science has made possible. Old and outmoded methods and techniques, must be refined and re-modelled to meet new challenges. You cannot split atoms with nails, nor can you tackle modern problems of mass education unaided by modern devices.

History of Broadcasts to Schools in India

Before Independence

School broadcasting in India, though still struggling to gain a toehold in education, can claim to have a history longer than that of All India Radio itself. In fact, as far back as 1927, two years before the establishment of the short-lived Indian Broadcasting Company, the Madras Corporation had a transmitter and put out, for Primary schools, educational programmes in Tamil. The Indian Broadcasting Company which was established in 1929, too, occasionally put out informal broadcasts to schools. The company was, however, soon replaced by the Indian State Broadcasting Service and in 1932 the Calcutta Station put out broadcasts to schools. However, soon after their inception, they were abandoned. In 1935, was established the Department of Broadcasting, and it decided to close down broadcasts to schools in favour of more immediately remunerative and popular types of programmes. In 1936, the Indian State Broadcasting Service was rechristened 'All India Radio'. Demand for the revival of broadcasts to schools reappeared. In 1937 the University of Calcutta and the Department of Education, Bengal, jointly approached the All India Radio to resume broadcasts to schools, and in November of that year, Calcutta Station started a half-hour programme for schools for two days in the week. In many things, All India Radio has modelled its working and policy on the lines of the B.B.C. and like the B.B.C., A.I.R. set before itself the triple objective—to inform, to educate and to entertain. Opinion in favour of educational broadcasts

was rapidly growing in volume and becoming more articulate. It was, therefore, decided to launch upon school broadcasting, without insisting on any extensive installation of radio receiving-sets in schools as a condition prior to the putting out of broadcasts to schools. All stations of All India Radio, then functioning, were directed to draw up, in consultation with the educational authorities of the Provinces, schedules of broadcasts to schools for the term October 1938—March 1939. Delhi, Lucknow, Lahore, Peshawar, Bombay, Dacca, Calcutta, Madras and Tiruchi started putting out broadcasts to schools. New stations, established subsequently, did not, however, automatically take up broadcasts to schools. During the Second World War, which broke out in 1939, school broadcasts did not have much attention from the organisation.

After Independence

As in many other fields of progress, the real turning point in the development of the school broadcasting service came with the independence of the country in 1947. Up to 1951, however, no distinction was made between school licences and licences for domestic use; and it is not possible to say how many schools did possess radio receiving-sets. In that year, it was decided to reduce the licensing fee for educational institutions from Rs. 15 to Rs. 3 per annum; and from then onward, figures for school licences in force are available. One way of assessing roughly the acceptability of broadcasts to schools is to study figures pertaining to school licences in force. In 1951, only 2,380 schools possessed radio receiving-sets. The succeeding year registered an increase of 600 licences. In 1953, the number rose to 3,830, thus, registering a further increase of 858. Over the years, increase in the number of licences has been gathering momentum. During the last two years, it has been more marked. In 1956, 8,296 licences were in force, and on the 30th September 1958, their number had risen to 10,878. Looking back over seven years, one finds that the number of radio receiving-sets has risen to nearly five times of what it was in 1951.

In the Second Five-Year Plan, the Union Ministry of Education has a scheme providing fifty per cent subsidy to State Governments undertaking to equip schools with radio receiving-sets and speakers in classrooms. The Ministry of Education has also set up the Audio-Visual

Education Section and the National Board of Audio-Visual Education, on which A.I.R. is represented by the Chief Producer of Educational Programmes.

But, increase in the number of school licences in force, by itself, does not tell the whole story. Surveys conducted recently by A.I.R. reveal that a considerable percentage of the receiving-sets in schools are lying derelict, and even those in good state of maintenance and repairs, are not being fully utilised. Another thing that must be taken into account in any assessment of listening in schools is the number of classrooms fitted with loud-speakers. Poor acoustics make listening to broadcasts less effective and less pleasant, and it is necessary to have at least one room acoustically treated to organise listening to school broadcasts. Only programmes of common interest can be profitably listened to, in the assembly hall.

Present Position of the Service

Programmes for schools now originate from fourteen stations and are relayed from another seven, giving us a total of 21 stations as listed below:—

Name of the Station	Date of Commencement	Language
Delhi	3.10.1938	Hindi and English
Bombay	Nov. 1938	Gujerati, Marathi and English
*Poona	19.11.1956	-do-
*Rajkot	28.11.1955	-do-
Calcutta	May 1947 (re-started)	Bengali and English
Trivandrum	15.10.1951	Malayalam and English
*Kozhikode	..	-do-
Patna	7.7.1952	Hindi and English
Lucknow	11.2.1952	-do-
*Allahabad	..	-do-
Nagpur	6.7.1953	Marathi, Hindi and English
Madras	Oct. 1940	Tamil, Telugu and English

Name of the Station	Date of Commencement	Language
*Tiruchirapalli	Oct. 1940	Tamil and English
Ahmedabad	July 1954	Gujerati, Marathi and English
*Baroda	..	-do-
*Vijaya-wada	October 1940	Telugu and English
Hyderabad	5.7.1954	Telugu, Urdu and English
Jullundur	3.1.1955	Punjabi, Hindi and English
Bangalore	11.10.1954	Kannada and English
Gauhati	4.5.1957	Assamese and English
Jaipur	8.7.1957	Hindi and English

(N.B.—Those having an asterisk do not originate programmes; they merely relay.)

Nature of the Service

The service is more or less entirely regional. In various language-areas, stations use the language of the pupils, to whom the programmes are addressed. There are, however, programmes in English from all stations; and stations of the South attempt programmes on 'Hindi by Radio'. Broadcasts to schools are, at present, being put out in thirteen languages and plans for extending the service to Kashmir and Orissa are under way. That will necessitate programmes in Oriya, Kashmiri and Dogri. It will thus be seen that the school broadcasting service of A.I.R. is fairly extensive. In the aggregate, the output of stations represents considerable expenditure of broadcasting time and effort—more than 40 hours of 'air time' are devoted each week to school broadcasts and about thirty supervisors, programme assistants, assistant producers, producers and staff artists are directly employed on a full-time or part-time basis in the planning, preparation and production of these broadcasts. However, the impact of this effort on schools, whether measured by the number of listening schools, or, by the respect in which the service is held by teachers and others, seems, so far, to have been small. Educational authorities and teachers seem to have little awareness of the contribution radio can make to their

work. They are still inclined to regard it as a sort of diversion or a frill; and school authorities sometime relegate broadcasts to the recess period or to a period outside school hours.

School broadcasts are mostly addressed to audiences of Secondary schools. In Bengal, they are confined to the VI, VII and VIII classes of the Middle standard of the Secondary schools. The only station that has attempted programmes for the Primary schools is Madras. Listening habits can best be formed early, and not till Primary schools are equipped with radio receiving-sets, can we hope that listening will become an integral part of classroom activity. It is difficult to justify the expenditure of more time and money on broadcasts to schools as long as audience for them remains small. Teachers are not likely to take more seriously the contribution of radio to their work unless they have opportunity of knowing, while under training or during re-training for the profession, the value and instructional possibilities of the radio method and the utilisation of broadcasts for the promotion of creative work among the listeners. A great deal, however, remains to be done to improve the content and quality of broadcasts to schools. It will be clear from what follows that every aspect of the problem is receiving thought.

Radio as a Medium of Mass Communication

Radio and its complement, the tape-recorder, have made possible the recording and reproduction, the storing and dissemination of sound and voice. Together, they mark the revival and refinement of the oral tradition and the rehabilitation of the spoken word. The invention of writing had, in a way, weakened the oral tradition. Writing became the chief channel of communication of knowledge. It gained a new prestige. From hearing, men turned to reading: the gateway of perception changed from the ear to the eye. Writing has been and will, always rank as one of the major achievements of human skill and ingenuity. It has helped man preserve knowledge. Books may, in fact, be likened to 'packaged knowledge' transported across time and space. Writing fixes the fleeting—it spans time and space, carrying thoughts and sentiments to other parts and to other times. But, in writing, the word undergoes a process of mummification. The written word loses the charm and impress of personality and the vibrant breath of the spoken

word. It congeals and petrifies speech. It entombs thought. The radio rehabilitates speech and revives and refines the spoken word. And, in a very significant way, the radio combines the qualities of both speech and writing. Writing is seldom impromptu. On the other hand, it is deliberate. It ensures and inculcates brevity and accuracy of expression. Now, broadcasts are, as a rule, scripted; they are often pre-fabricated. They are the result of planning and skilled editing. Each sentence and each expression is chiselled and polished. But, though scripted, a broadcast is written not merely to be read aloud, but to be 'spoken' with all the verve of life. It must employ the spoken language. The sentence structure must conform to the radio idiom. A good article for a journal may not necessarily make a good broadcast.

Another achievement of the radio is that it extends the scope of oral transmission without spreading it over time. Unaided human voice has only a limited range, while the range of the radio is unlimited and reception at the other end almost instantaneous. Recording on tape and disc has further made it possible for the perishable spoken word to be captured and preserved, to be repeated when needed. Sound recording has enabled us to listen to voices, which time may have silenced for ever. On the radio wave rides the human voice at a terrific speed, circling the earth seven times in a second.

Qualities and Limitations of the Medium

While discussing radio as a medium of mass communication, it will be proper to know its limitations. A broadcast brings to the listener disembodied voice coming, as it were, from nowhere. Broadcasts are primarily an experience in listening. There is nothing to occupy the eye. But, this may not be altogether a defect or necessarily a handicap. There is such a thing as pictorial language and, after all, words represent and convey experience and portray men and situations. The imagination and experience of the listener help him conjure up appropriate mental pictures. The canvas of imagination is certainly vaster; and the listener can paint on it rich pictures full of life and colour. Some of the works of great masters of fiction and poetry are not illustrated, and yet they succeed in leaving in the mind of the reader rich and growing pictures of situations described and persons portrayed. For instance, most of the

editions of the works of Thomas Hardy are not illustrated and yet he succeeds in peopling the mind of the reader with rich pictures of landscape and social situations. Thoughtful choice of words and phrases can succeed in overcoming this apparent drawback to a very large extent. Let us weigh against masterpieces of literature, the horrid things called 'comics'. They are mostly pictures, with a little writing thrown in here and there. They only succeed in giving us a shoddy and distorted picture of life at its ugliest.

Another apparent defect of the broadcast is that it is one-way. You cannot ask questions which may arise in your mind as you listen. You have no means of having your doubts resolved. You cannot ordinarily speak back. These defects are not altogether incurable. A practised broadcaster establishes an intimate personal contact with the listener. He speaks to a large invisible audience but he speaks to each one. Besides, he feels the presence of an invisible audience, anticipates their difficulties and answers questions which are likely to be asked by the listeners. Opinions and views of the listeners are occasionally broadcast at the end of a series and questions from the listeners, too, are sometimes answered. These factors mitigate, to a very great extent, the defects occasioned by the inability of the listener to speak back. It may, however, be mentioned that 'speak-back' arrangements have been provided by the more progressive broadcasting organisations. The school broadcasting service of Australia, for instance, has this speak-back arrangement.

Another defect of the radio medium is that it perishes in the utterance. You cannot ask the broadcaster either to vary the pace of speech or to repeat it. This defect is largely met by the possibilities of recording on tape and disc and repeating it at leisure. Thus, the defect is, to some extent, remediable.

Radio as a Tool of Education

As a tool of education, radio is entering a new era. And even television, with all its charm and excitement and with all the backing of the Kinescope, is not likely to dislodge it from the place it holds in education. As a medium of education, television suffers from two technical disadvantages. Firstly, the range of individual stations is relatively limited; and secondly the screen is too small

to bring to the viewer a big enough picture of things actually happening, or an illusion of seeing things in real life.

Children and adults need to be informed faster and more fully than ever before and the traditional methods of teaching and learning are facing a strong challenge. It is our good fortune that a new technological aid to mass education should come just when the time calls, as never before, for an accelerated tempo in classroom instruction, and the dissemination of knowledge to the public at large.

Need for Publicity: Ignorance and Prejudice

New aids gain vogue slowly. In earlier stages, they are often suspect—they are looked upon as innovations. Sometime they are regarded as yet another task added to the many tasks of those, whom they are meant to give relief. Inertia, prejudice, lack of initiative and courage to experiment stand in the way of the ready adoption of new devices. What will be the role of the educator in this new era of science and technological aids? Will he equip himself with this powerful tool to make himself more effective, and to mitigate the strain of the ever increasing burden of new challenges of his profession, or will he cling to outmoded methods?

For the lack of enthusiasm for this new medium, radio itself is partly responsible. We are living in fast moving times. Ours is the age of public relations, of large-scale, Persistent advertisements and 'aggressive salesmanship'. Demand is created, often factitiously. Things are forced on us. Even churches and religious societies employ the medium of advertisement to further their own ends. The sale of the best of books depends on sustained publicity and advertisement. There is hardly anything like a good book or good thing making its own way. All this reacts on the sensitivity of people. It is a delusion that anything of intrinsic worth will find acceptance on the sheer and sole ground of its worth. It would be no longer true to say that 'good wine needs no bush'.

The fact is that, in our country, the possibilities of the radio as a medium of education have not yet been clearly

apprehended by the teaching profession or publicised by A.I.R. The State Departments of Education are inclined to look upon broadcasts to schools as merely a frill and the teacher is not unlikely to regard them as yet another task imposed on him on top of the already over-loaded school curricula. Few realise that school broadcasts can both lighten and brighten the task of the teacher. Often, broadcasts are criticised without any knowledge of what they are and how they can be utilised to enrich classroom instruction, and to further educational purposes.

CHAPTER II

BROADCASTS TO SCHOOLS: THEIR AIMS AND METHODS

Aims—Communication of Knowledge without Instruction: Enrichment of Listeners' Experience and relating Knowledge to Real Life Situations

Broadcasts to schools are devised to help the teacher in his work. They aim at communication of knowledge without resorting to 'instruction'. Syllabuses often have many lacunae. Broadcasts to schools are intended to round off the syllabuses and to bridge gaps, if any. As a matter of fact, there are many! The tendency to treat different subjects in water-tight compartments screens from view the interlocking and inter-connection of different branches of knowledge, distorting the true perspective.

School textbooks often give information by the list, without making clear their social relevance and their relation to what young persons daily experience and encounter in the act of living their lives as students and as members of the community. *Broadcasts are directed specially to bring out the social relevance of knowledge.* All knowledge, in whatever way communicated, has value. But, minds can be stimulated more powerfully not merely by the quantum of knowledge but by the thrilling story of 'how knowledge was acquired' or 'how a discovery was made'. Life is a struggle, and young minds draw delight and inspiration from stories of quest and exploration; of how others, by hard work and perseverance, and by intelligent observation and experiment, achieved results and came by significant discoveries.

Broadcasts can be and often are employed as an effective means of conveying to the listener the personality of the speaker. Most of the young persons at school do not have a chance to meet eminent men and women. On the radio receiving-set, however, they can listen to their speech and feel the impact of their personality. Human voice has a way of conveying the personality of the speaker.

Radio has certain obvious advantages in the field of speech education. Resources of A.I.R. are infinitely larger than that of any best equipped school. It can tap talent from a much wider area and give students and teachers alike, programmes, which, besides conveying information and knowledge in a pleasing way, set before them standards of performance, against which they can model and measure their own.

School Broadcasts do not Profess to Supplant the Teacher

The radio is no substitute for the teacher, and there should be no question of school broadcasts dislodging or supplanting the teacher or, for that matter, even to minimise the importance of regular instruction. But, if the work in schools is to be enriched and related to what is happening around us, school broadcasts offer obvious advantage. In some measure, they equalise opportunity for the inadequately equipped and the far flung schools. Out in the country, schools may not have good libraries and the teachers may not be aware of what is being attempted by other and better equipped institutions. The ordinary teacher, in ordinary schools, often does not possess all the knowledge needed for his work. He is invariably likely to be out-of-touch with the latest trends in educational theory and practice. Depending largely on textbooks, he lacks appreciation of the social relevance of the knowledge he is retailing to his students. As a consequence, students begin to regard learning as something distinct and apart from living. They resort to unacademic practices. They begin to depend too much on notes, catechisms and help-books. Unintelligent memorising takes the place of intellectual exertion. They fail to develop insight into the significance of what they know through books. While memory is loaded with information, intellect is starved and dwarfed. Education ceases to be the thrilling adventure that it should be. It becomes a burden of the mind.

Broadcasts and Class Activity

Broadcasts to schools should not be regarded as something different from, or opposed to customary practices of learning and teaching. In most cases, they can be integrated with class activity. A story listened to on the radio could easily be dramatised by the listening pupils, each

character playing his or her part in a natural way without having to con up parts from a written script. They can also be made an occasion for working out programmes of observations. For instance, if a class has listened to a programme on 'Safety First', built round an accident, the teacher could suggest that little accidents, that happen daily around us, at home and in the street and the school, should be listed by each student and their circumstances clearly analysed. This would give to students an insight into how accidents do actually happen and how they can be avoided by imaginative anticipation.

Schedules of broadcasts to schools are invariably planned to promote a knowledge of the working of our bodies and minds and the behaviour of men and things around us. Broadly, they aim at providing general education, which does not receive the thought and has not so far been given the place it should have in our education. Unfortunately, school education has become largely a mechanical study of subjects and topics.

Broadcasting Techniques : Forms of Presentation and Thought Content

Broadcasts to school take many forms. Some programmes come very close to class lessons. They may be regarded as 'radio lessons'. In such programmes, the method followed is to create, in the studio, the classroom atmosphere and to reinforce the illusion by questions and student-participation. The teacher is there and so is the class. He addresses the pupils and asks and answers questions. Naturally, some of the answers by pupils turn out to be wrong. The wrong answer is made the occasion for explaining the mistake and the listener is led on to the correct answer by a process of thinking and recollecting and colligating. Such a programme gives to the class the satisfaction of what may be called 'vicarious participation'. In the follow-up, the teacher can pick out other points in the lesson—points which would gain in effect and clarity by guided discussion with the students. The class could also be asked to recapitulate and re-tell and write down the cardinal points of the lesson listened to, on the radio. Madras-Tiruchi have been putting out a series of programmes on "Good English". To give a concrete idea of how a programme of this type is devised and how it can be

utilised, an excerpt from one of these programmes is given below:

GOOD ENGLISH: ADJECTIVES

Teacher: To-day I'm going to say something about 'Adjective'. You all know what an adjective is, don't you? Well, can any one give me the definition of an adjective? Yes. You!

Student: An adjective is a word used to describe a noun.

Teacher: Yes. Good. Can you now give me an example or two, just to show we know what we're talking about?

Student: A good boy. A fine day. The sun is hot.

Teacher: Good. *Good!* Is that an adjective? Yes. Well, what word does it qualify? . . . Well, grammarians say when it is used like that it is used absolutely—or you might say it means, "your answer was good".

In this programme, the method followed is exactly the one which a good teacher ordinarily follows in the class. Of course, there is one difference. The broadcast was scripted beforehand. It was also rehearsed. It was in fact tape-recorded, so that Father Hession, who scripted the programme and performed before the mike had occasion to listen to his own performance and to correct and emend, where he felt such emendation was necessary, or would add to the effect and quality of the programme. You might say that such a lesson is apt to lose in spontaneity what it gains in quality. This may not be wholly or always true. Those responsible for the planning and production of broadcasts to schools see to it that though a great deal of labour is put into the production of programme, the circumstance is not allowed to impair its spontaneity. Such programmes do not, however, typify broadcasts to schools—they do not represent the essential characteristics of a school broadcast at its best.

Quiddity of a School Broadcast

Broadly speaking, a school broadcast is not a lesson, though it has the same purpose, *viz.*, the communication of knowledge and its assimilation by the listener. Programmes which assume the form of a lesson, are more

useful for the teacher than for the pupils. The teacher can draw inspiration from the content and the mode of presentation of the expert and thus plan his own performance on a similar model. He can, also, as indicated before, make the broadcast the basis of his own lesson in the class and initiate useful discussion. Like a good lesson, again, a good broadcast should not merely satisfy curiosity or simply supply an answer. It should promote inquiry and whet the appetite of the listener for further learning. But, it should be remembered that *both in concept and in structure, a broadcast is fundamentally different.* A lesson grows spontaneously according as the situation develops in the classroom. On the other hand, a broadcast is planned and scripted beforehand. It is pre-fabricated. Planning implies team-work spread over time. The programme should make good and easy listening. It should not be packed with more information than the listener can readily assimilate, or the programme can hold. The argument **should** be simple, and illustrations home¹ and related to the experience of the listener.

The Listening Experience

Listening is different from reading. Reading pre-supposes a certain amount of leisure and some mastery of your time. The reader can, and often does, re-read the same passage—two or three times over, if he so chooses. He slows down his pace of reading or speeds it up according as the passage is difficult or easy, while in listening to a school broadcast, the pupil has no such choice. He cannot determine the pace of the broadcast. He cannot ask the broadcaster to repeat himself. He cannot, as things are at present, 'speak back'. These circumstances impose a responsibility on the broadcaster to anticipate and forestall some of the likely questions and to answer them. Different interpretations, which can be put on a situation, should be brought out. The language should be the spoken language, used in everyday intercourse and should be based on live contact with the listener. The sentence structure and sequence of thought should also ensure easy assimilation. It should avoid boredom.

The Place of Technique

Technique plays an important part in all fields of human communication. Technique is 'specialised skill', a

mode of artistic execution. We have for it the expressive Americanism—'Know-how'. Study of methods claims a large proportion of the time and effort of those engaged in the business of education. In fact, a large volume of literature has grown up round it. That is as it should be. Method is a way of economising effort—of achieving larger and surer results at greater speed. It deals with how knowledge and information can be most effectively presented to a group of learners in consonance with their maturity, their educational and social background and earlier experience. In making a programme, some points have to be abridged, others may have to be enlarged, to produce a balanced whole. It is always necessary to put things in proper perspective. A programme should be both instructive and entertaining, without making it akin to burlesque. It should be capable of achieving quick understanding and ready assimilation. Finally, it should be capable of a good follow-up by the student and the teacher. But, too much reliance on technique has its own dangers. You can ruin a programme by being over-methodical, or by merely filling out a prescribed outline.

Ensuring Listening

Listening to broadcasts to schools cannot always be taken for granted. You do have, so to speak, a 'captive audience'—the class listening to a radio programme for schools. The students have to be there on pain of being marked absent. But, the simple physical fact that they are in the class is no guarantee that they will be listening. They are certainly not in a position to switch off the radio, but they will automatically switch off their attention, if either the subject-matter or the mode of presentation, or both, are either dull or beyond the reach of their intelligence. In all processes of education, we aim at purposeful listening to achieve educational results. How do radio programmes achieve this?

People listen to things they are interested in and to persons, for whom they have respect and whose words carry conviction. In fact, those who have first-hand knowledge of things and can speak from personal experience or have made a thorough study of the subject and can speak with authority, are just the persons, who will be listened to. Some speakers have about them that indefinable something, 'the charm of personality'. What they say is

eagerly listened to. Similarly, a broadcaster may come to have a particular appeal for student audiences. This circumstance can invariably be exploited to considerable advantage. Stock characters and a good radiogenic voice to which the listeners have become used, have their own share in promoting listening.

Charm of speech consists, in the first place, in the style of speech. But, style itself is a composite idea—it is the way things are expressed, as also the way they are uttered and the quality of voice that the speaker can throw into his or her utterance. Mastery of pronunciation and correctness of accent and intonation further add to the listening value of a radio programme. Poorly performed programmes, whatever their thought-content, do not, as a rule, make good listening. Besides style, there should be substance in the programme—something to satisfy, as also something to raise doubts.

Attention Gears

Holding the attention of the invisible audience is a major problem of programme scripting and production. Loose sentences induce inattention and produce boredom, while brisk sentences ensure attention. Take, for instance, the two ways in which a common situation can be conveyed to the listener:

- (a) I went to Lucknow the other day and met your brother.
- (b) The other day, when I went to Lucknow, I met your brother.

The second mode of conveying the idea is likely to hold attention, whereas the first is likely to do just the reverse. 'The other day' followed by 'when I went to Lucknow' holds out to the listener promise of something of interest to him.

When you are engaged in a conversation, you can afford to be slipshod and careless, as other circumstances help you hold the attention of your 'victim'—his respect for you, reinforced by a kindly gaze, a shrug of the shoulder, a pat on the back or, perhaps, the tasty food between you. But, in a broadcast, you listen only to a voice; and it is

essential that sentences are so constructed as to sustain interest and keep curiosity on edge. The broadcaster must make his point simply and clearly. And, if there is occasion for digression, he must come back to the cardinal point in the argument or the story.

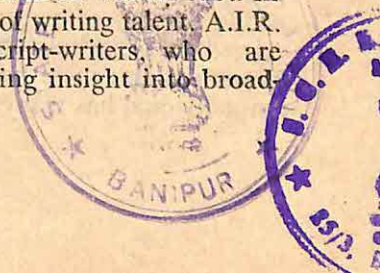
Duration of Broadcasting for In-School Listening

Educational programme-planners must give thought to the duration of broadcasts. As a rule, programmes should not be too long—they should not exceed twenty-five minutes or so. Nor should they be too short. If the duration is less than ten minutes, brevity may only be gained at the cost of clarity and intelligibility. And, if the duration is excessive, patience of the listener is bound to be strained. Besides, no time will be left for preparation and follow-up, as the duration of periods varies from 35 to 45 minutes. No rigid formula can, however, be laid down. The duration of the programme is related to the nature of the subject, and the form in which it is presented. Features can run into thirty minutes.

Scripting of Programmes

The more advanced radio organisations have permanent staff for scripting broadcasts to schools, though, even they have often to have programmes scripted by journalists and specialists and professional writers. At present, All India Radio depends, very largely, on the practising teachers. They are given contracts, on payment of a small fee, to write out the script. This necessitates very detailed briefing by the Producer. The results, however, are not always what they should be. The school teacher, very often, fails to appreciate the limitations and peculiarities of the medium. He is inclined to pack too much information into the broadcast. His performance at the mike, too, is frequently not of a very high standard. A.I.R. stations are endeavouring to build up panels of broadcasters and script-writers. A short course for broadcasters and script-writers was held in Bombay in December 1957 under the direction of Mr. J. R. Reed, Assistant Head of School Broadcasting, B.B.C. A workshop for radio-writers was held in Delhi in May 1959 and another in Mount Abu in June 1960. It led to the discovery of writing talent. A.I.R. also employs, on short contract, script-writers, who are gaining experience and are developing insight into broadcasting techniques.

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Relating Knowledge to Real Life Situation

Educational programmes, besides communicating knowledge and information, aim at relating knowledge to social situations and everyday needs of civilised communities. Instructional procedures, ordinarily adopted in schools, divide up knowledge into compartments and each subject into topics. The inter-relation between different branches of knowledge is, in consequence, hidden from view and the learner fails to perceive and appreciate the organic inter-relationship of different areas of knowledge and its unity. The result invariably is that the knowledge of school children remains bookish. They cannot apply it to the understanding of ordinary occurrences and situations around them.

Creation of a School Broadcast means Team Work

Production of school broadcasts calls for special skills in scripting, performing before the mike, selecting appropriate music and sound effects, and choosing voices, where acting is necessary. Besides their thought-content, programmes, to be successful, should have emotional appeal and the quality of both satisfying curiosity, and sharpening it.

Radio-Writing—A New Art Form

The production of each programme is a process spread over time and involves briefing, consultation, discussion, editing and rehearsing—in fact, team-work among a number of persons, each contributing to its creation. Radio-writing is a new art form. Broadcasts to schools are built up round real-life situations. For instance, a programme having civics for its subject, will not list rights and duties of the citizens in the usual class-lesson manner. On the other hand, it will aim at creating situations devised to deepen social consciousness and influencing the outlook and attitude of the listeners in such a manner as to give them impetus for smooth operation and adjustment to their social and physical environment. Social situations, which usually produce friction or conflict are selected to put across ideas which bring home to listeners the folly of acting selfishly or aggressively. The study of civics is, thus, related to behaviour and outlook of the individual and no longer remains mere book knowledge of 'rights and duties'. An individual has many areas of contacts with others. Some

of these contacts are occasional and passing, while others are intimate and long-lasting. The individual lives in the family, consisting of parents and brothers and sisters. And, if it happens to be a joint family, there are cousins, uncles and aunts. In such a group, irritating situations do often arise. Adjustment, mutual accommodation and tolerance are needed to avoid unpleasantness and to ignore little annoyances. A series of programmes was put out by the School Broadcasting Service of Delhi Station to bring home, to listeners in schools, the need and value of thought for others. To gain a clearer idea of the way in which programmes set out to achieve these results, let us study the content of one of these programmes. The title of the programme was 'Living Together' and the situation depicted is outlined below. It was presented as a feature with different voices and appropriate background noises, and sound effects.

There is a young couple, who have two daughters aged eight and eleven. The parents take an evening off—they go to pictures. Before leaving, the mother asks the children to behave themselves—to have their dinner in time and to go to bed not too late. Soon after the parents leave, the little kitten, the pet of the younger sister, jumps into the bed of the elder and nestles cosily in it. The elder sister notices this and is angry. She lifts the kitten and throws it on the carpeted floor and says many harsh things. This offends Lata, the younger sister and an argument follows. In a fit of temper, the elder sister Kusum shouts at Lata and says, "Get out of the house. I do not like the look of you. You are a nuisance!" The little girl takes her sister at her word. She rolls up her playthings, puts them in a bag, holds the pet in her arms and in deep resentment leaves the house unnoticed. Walking aimlessly, she strays into a park, not far from their house. For some time, the elder sister does not notice Lata's absence. But, soon she becomes aware of it. She looks for her, but Lata is nowhere around. Night sets in. Kusum gets worried, repentance comes on her. She cries and sobs and takes a vow never again to speak harshly to her sister or, for that matter, to anyone.

Lata does not return in spite of all her shouting and prayers and Kusum gets still more worried. Ultimately she decides to seek the help of the neighbours next door.

The son of the neighbour, a young man, offers to go out on his bicycle to look for Lata.

The evening was wet. Winter rains had just started and there was real cause for worrying. Lata was ultimately tracked down to the park, where she was sitting on a bench, soaked and shivering. She was brought back home. Kusum hugged her with delight and promised to be always nice to her and she was ever so nice to her in future. When, the parents came back from pictures, they found Kusum still awake troubled by a sense of guilt. The sincere repentance and the emotional agitation of Kusum touch sympathetic chords in the hearts of the listeners and succeed in bringing home to them the value of restraint in speech and the need for mutual accommodation. A learning situation is thus created and the listeners share experience which inculcates, without teaching, the lesson of restraint and thought for others. Other programmes in this series depicted situations in other spheres of daily contact: 'In the School', 'In the Playfield', 'In the Bus' and 'Meeting Strangers'.

Similarly, if the aim is to give listeners' some idea of the way in which infection and contagion can be prevented and combated, situations illustrating the way it can be achieved, are created. A road accident or a visit to a friend or a relation in the hospital will be made the occasion for weaving in information relevant to the subject of the programme. Things will be studied in the context of real-life happenings and under the urgency of immediacy. When the mind is puzzled, it seeks solutions. It tries to understand the circumstances which caused the accident or produced the illness. Learning processes are thus set into motion. When a friend is ill, you wish to know how he contracted the illness. Your interest in understanding the way diseases are contracted, gets reinforced by the anxiety for your friend. You try to understand the way the disease can be treated and prevented. Preventive measures like vaccination and inoculation will have a new meaning and a more immediate and personal appeal. You say to yourself: 'only if my friend had bothered to have himself inoculated against cholera!' Knowledge will no longer be mere addition to your stock of learning. It will be related to what holds your interest at the moment. In such circumstances knowledge is assimilated in a natural way and gets transformed into experience. Experience gives you

the understanding of connections and inter-connections by thoughtful observation and by discovery of relationship between cause and effect. It helps you predict consequences and anticipate reactions and results—actual and possible. It further gives you occasion to test generalisations and the skill to apply your knowledge to the solution of specific propositions. In short, it makes knowledge an instrument of efficiency.

Featurisation

Broadcasts to schools often take the form of features. Featurisation gives programmes the quality of live experience. Things are not merely told or described; they reveal themselves in the conversation and attitude of characters in the story or the situation.

Featurised programmes are developed round stories of patience and perseverance, and of struggle that precedes success. Chance coincidences, if any, are brought in to heighten the interest of the story. A programme on malaria in a series of broadcasts under the title 'Conquest of Disease' would be pale and lifeless if the difficulties, under which Sir Ronald Ross worked, are not recalled or if no mention is made of his earlier failures and of the ridicule that was heaped upon him by scoffers. *It is the story of human struggle in quest of knowledge that is likely to hold the interest of the listeners more than the mere content of knowledge.*

Take another instance—the story of the growth of the great wool industry of Australia. To make an interesting programme on this subject, it would be necessary to weave into it the story of the struggle of Captain John Macarthur who started sheep-farming in that country and laid the foundations of Australia's prosperity. The difficulties he encountered, the opposition he met, the failures which beset his earlier efforts, make it a story of human struggle and the triumph of human imagination over physical, social and economic obstacles. In June 1958, the Australian Broadcasting Commission, in cooperation with the Federal Youth Education Department, produced for the School Broadcasting Service of All India Radio, a programme on 'Wool in Australia' which will be found in Appendix 'A'. It will give the reader some idea of the techniques of scripting a featurised programme and also of the studio technique of making it a richer experience in listening.

The struggle of Macarthur invests the programme with deep human interest.

Another example of the feature technique will be found in the programme on the Holy Ganges, which is also given in Appendix 'A'. This programme was produced by A.I.R. for the School Broadcasting Service of Australia. Here, the vision of Mother Ganges is conjured up to relate the legend of King Bhagirath coaxing the mighty river to descend from the snowy heights of the Himalayas to the plains of Northern India.

Use of Stock Characters

There are other techniques of building up programmes for student listeners. Stock characters are created. You have a know-all uncle and two inquisitive children, a brother and a sister, who keep pestering the uncle with all types of questions. Patiently, he answers their queries and resolves their doubts. Humorous situations are created to lighten the programme. All information and no fun make a programme dull, while lively humour in a programme adds to its listenability and gives the listeners mental foot-holds, as it were. Radio programmes should have the quality of pleasing as much as of educating.

Radio places before itself a threefold objective—to inform, to educate and to entertain, and the three ideas are not mutually exclusive.

Stories over the Radio

Listening to a story well told is a delight. The art of story-telling is unfortunately dying out. A good story will hold the attention and interest of the listener and give him not only delight, but appreciation of its literary style and emotional content. Stories told by cultivated voices can provide effective means of imparting knowledge without the tiresome effects of obvious instruction. School broadcasts aim at promoting the listening habit and story-telling can be a vital force in this. Stories people the mind of the listener with thoughts and things, and stimulate effort, inspire ambition and vitalise imagination.

Programmes on Speech Education

Both in concept and practice, our system of education does not give any place to speech education. Even Train-

ing colleges preparing graduates for the teaching profession do not give it much thought. Consequently, speech, the chief stock-in-trade of the teacher, is in short supply. The teacher is not distinguishable from others by the correctness of pronunciation or intonation, or by the effectiveness of his speech. Radio can make important contribution in this field of educational endeavour. A.I.R. programmes in speech training in English and Hindi, as also in the regional languages, offer opportunities to students and teachers alike, to learn by listening and to model their own speech on the performance of cultivated voices. The speaking of poetry, the chanting of verses in the traditional style, effective and interpretative reading aloud of prose passages by practised voices, and, lastly the recitation of poems by the poets themselves, add to the joy of listening and give the listeners in schools a new experience which they long cherish.

Student-Participation Programmes

All India Radio encourages student-participation in programmes, where such participation contributes to the vividness of programmes or enhances their listening appeal. Debates and discussions and quiz programmes form a regular feature of broadcasts to schools. Annually, most stations organise an inter-school discussion or debate. It is usually organised in cooperation with the State Education Department of the area. Teams qualifying for the final contest are brought before the mike. These discussions are not scripted—participants are not allowed to read from notes. This makes for spontaneity and naturalness and gives to participants certain poise and confidence.

School-made Programmes

Occasionally, schools are brought to the studio to give programmes of song, recitation, play-reading, and story-telling. All India Radio gives guidance to schools selected for such programme-presentation. They are initiated into the art of speaking on the mike to invisible audiences.

Broadcasts from Schools

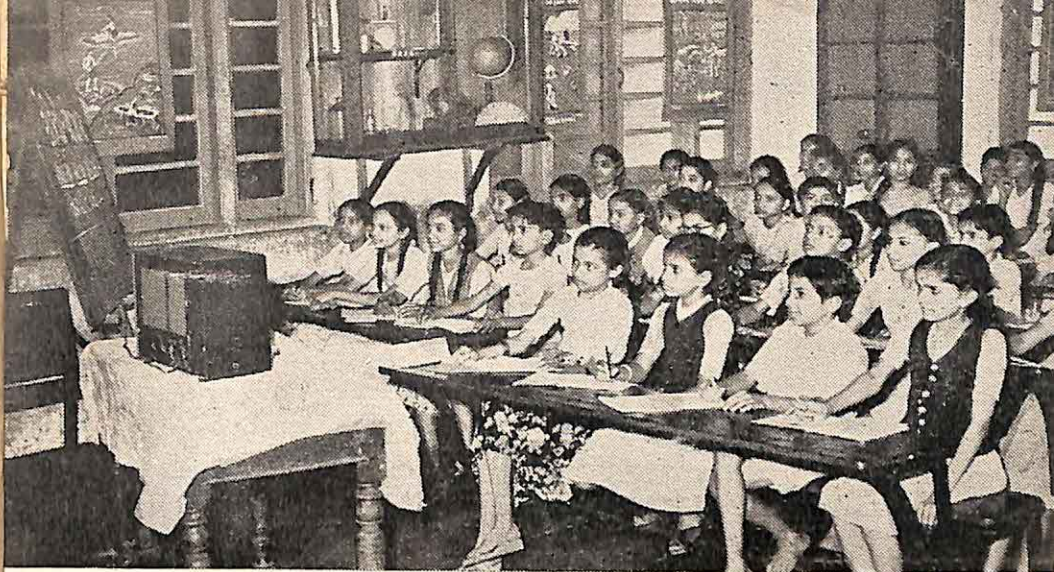
Outside broadcasts (O.B.'s) from schools are, occasionally, attempted to give to schools opportunity to have programmes put on the air in their natural setting. Such programmes have considerable public relations value.

Outside broadcasts have about them the ring of actuality—they bring to the listener a sense of vicarious participation. Studio-made programmes are sometimes apt to distort things and sound 'stale' and anaemic. Even, when technically not so perfect, outside broadcasts succeed in conveying a more vivid and more lasting impression.

Studio Techniques : Sound Effects and Background Noises

Planning and scripting of broadcasts to schools is no doubt, very important. But, they constitute only half the job. After the script has been checked up for accuracy and properly edited, it is passed on to those whose business is to put it on the air, to give it wings, as it were. Studio techniques of production are as important as writing for the radio. A.I.R. has a library of sound effects and noises. In our minds, most human situations are associated with certain peculiar accompanying noises. The thumping of the feet, the whining of the wind, the clatter of the hoofs of horses, the patter of rain, all conjure up in our minds pictures of situations, which they represent and convey. Different voices convey character, mood and age of the speaker. A child's voice has its own qualities and so has the voice of an old man or a young woman. By selecting voices thoughtfully, programmes can be produced to help the listener to re-create, in imagination, the picture intended to accompany the thought content of the programme. Illusion of distance can be created by a person moving away from the mike, by the device of creating a sound perspective. The speaker moves only a few feet away from the mike, while the illusion of considerable distance is conveyed to the listener.

Musical bridges and musical prologues and epilogues enrich radio broadcasts. Thematic music reinforces the spoken word and makes listening a pleasanter experience.



A class listening to school broadcast



Quiz programme in progress





English lessons being conducted for Middle schools
in a programme for school children

Students and their headmaster participating in
a school-made programme competition



CHAPTER III

ORGANISATIONAL SET-UP AND PROCEDURE

Organisational Set-up at the Headquarters and in Stations

The School Broadcasting Service of All India Radio is, more or less, entirely regional. Each station independently plans and puts out programmes for the region it serves. Stations having school broadcasting service have either a Producer or an Assistant Producer or an Educational Supervisor according to the status and needs of the station. As a rule, Producers and Assistant Producers are persons with considerable and varied educational experience and with aptitude for broadcasting. In the first instance, they are recruited on short contract. If their work is satisfactory, a three-year contract, further renewable on condition of good work, is given. With the Producer, or the Assistant Producer, or the Educational Supervisor, as the case may be, is associated a Programme Assistant belonging to the permanent cadres of A.I.R. Administrative duties relating to the issue of contracts and payment of remuneration are entrusted to this officer. He is also expected to check up the scripts to see that nothing wrong or objectionable goes on the air.

At the Directorate, there is the Chief Producer of Educational Programmes. He supervises and co-ordinates the working of the service in different stations and serves as a clearing-house of ideas. He sends out suggestions regarding the content and form of presentation of programmes. Programme Exchange Unit (internal and external) enables stations to exchange programmes and to avoid waste of labour that would be occasioned by two or more stations attempting programmes on the same subject.

Consultative Panels

With the school broadcasting service of each station is associated a consultative panel of educationists, both administrators and practising teachers. It has nominees of the State Education Department as well. The panel

meets periodically to discuss the schedules prepared by the person in charge of the school broadcasting service. The number of members of the panel varies from five to sixteen.

Procedure Followed in Working Out Schedules of Broadcasts to Schools

Stations putting out broadcasts to schools are expected to keep in touch with the listening schools. Suggestions are invited from all interested. A suggestion book is also kept in each station. Visiting educationists and teachers may enter their suggestions in this book. Evaluation report blanks are sent to listening schools to obtain their criticism and guidance. Most stations put out programmes for two age groups—11-14 and 14-17. Till recently, Madras was putting out programmes for Primary schools as well. They have since been abandoned.

The Producer or Assistant Producer or Educational Supervisor, plans broadcasts, relating them to what has been put out before, to curricula and courses of study, and to suggestions received from individual teachers and the listening schools:

The draft schedule is further discussed in the weekly programme review meeting of the station. The Station Director then fixes a meeting of the Consultative Panel and sends to every member a cyclostyled copy of the proposed schedules. The panel then discusses the schedule item by item. It may suggest modifications and amplification of the proposed programmes. Suggestions thrown up in discussion, are incorporated in the schedule and submitted to the Chief Producer at the Headquarters for scrutiny and approval.

Case History of the Procedure Actually Involved in the Preparation of the Schedule of Broadcasts to Schools of Patna Station for the Term January—May, 1958

It will help us to have a clearer idea of the procedure, if we care to follow 'the case history' of the schedule of school broadcasts of the Patna Station for the term, January—May, 1958.

The school broadcasting unit of Patna started working on the schedule some time in September 1957—may have been earlier. It is usual to go through the schedule of broadcasts for the preceding term to see, which of the series put out before can be repeated with profit—either in the original or in modified form. Generally, requests and comments from the listening schools help the station in coming to a decision. Informal consultations are also usually held with broadcasters who are often commissioned to broadcast and others whose advice is valued. Some stations have informal specialist committees for programmes on science, social studies and language and literature. Suggestions are also invited from the listening schools. Having drawn up the schedule on the basis of these consultations, suggestions and discussions, it was placed before the Consultative Panel in its termly meeting held on the 30th November 1957. The Panel discussed the schedule item by item and suggested changes and modifications, which were subsequently incorporated in the schedule.

The schedule as it emerged from the discussions of the Consultative Panel was submitted to the Directorate General on the 6th of December 1957. It had the following series. The object of each series is briefly indicated. Titles of programmes in each series have also been listed.

(1) *Architectural Styles*

A series intended to acquaint the listeners with different styles of architecture evolved in different periods of Indian history.

- (i) Buddhist style
- (ii) Jain style
- (iii) Mauryan style
- (iv) Gupta style
- (v) Nagar, Indo-Aryan and Chalukyan styles
- (vi) Afghan style
- (vii) Mughal style
- (viii) Influence of European architecture
- (ix) Modern style—functional and utilitarian

(2) *Our Festivals*

The series aims at giving the listeners some idea of the origin and significance of festivals and the way they are celebrated in different parts of the country.

- (i) Basant Panchami
- (ii) Shivaratri
- (iii) Holi
- (iv) Ramanavami
- (v) Birthday of Lord Mahavir
- (vi) Good Friday
- (vii) Id-ul-Fiter
- (viii) Birthday of Lord Buddha

(3) *Stories in English Verse*

This series of featurised talks is intended to present stories from English verse. The following stories would be featurised:

- (i) Lord Ulin's Daughter
- (ii) The Pied Piper of Hamelin
- (iii) Shorab and Rustam
- (iv) Bishop Hatto
- (v) John Gilpin
- (vi) Lucy Gray

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(4) *Scenes from the Ramayana*

The purpose of this series is to bring out different aspects of the character of Shri Ram.

- (i) Shri Ram and Kaikei
- (ii) Shri Ram and Dasharath
- (iii) Shri Ram and Lakshman—I
- (iv) Shri Ram and Lakshman—II

(5) *Great Scientists and their Achievements*

Important inventions and discoveries made in the 19th and 20th Centuries will be covered.

- (i) Eugene Souberran : Chloroform
- (ii) Long: Anaesthetic Ether

- (iii) Darwin : Origin of the Species
- (iv) Lister : Antiseptic Surgery
- (v) Issac Newton : Gravitation
- (vi) Pasteur: Microbes
- (vii) Baird : Television
- (viii) Fleming : Penicillin

(6) *Scientific Explanation of Simple Phenomena*

Aims at explaining scientific principles involved in some of the ordinary occurrences of everyday observation.

- (i) What makes a bee hum?
- (ii) Why do the stars twinkle?
- (iii) Why cannot fishes live on land?
- (iv) Why do birds not fall to the ground?
- (v) What makes a kite fly?
- (vi) Why do spiders not get caught in their own webs?
- (vii) What makes the balloon fly?

(7) *United Nations and the Specialised Agencies*

This series aims at giving an account of United Nations and its Specialised Agencies.

- (i) United Nations
- (ii) I. L. O.
- (iii) F. A. O.
- (iv) UNESCO
- (v) W. H. O.
- (vi) UNICEF
- (vii) ESCOS
- (viii) ECAFE

(8) *Basic Industries of India*

It deals with the location, output and potentialities of the more important industries.

- (i) Cotton Textiles
- (ii) Iron and Steel
- (iii) Jute

- (iv) Sugar
- (v) Paper
- (vi) Silk
- (vii) Wool and Woollen Textiles
- (viii) Cement
- (ix) Coal Mining

(9) *Recreations*

Includes discussion on activities for leisure and comprehends, stage-acting, story-telling, pen-friendship, sketching, magic tricks, photography, word-building, observations and exercises.

(10) *Major Projects in Bihar*

It includes talks on Bokaro's Thermal Power Station, Kosi Project, Ganga Bridge.

(11) *Some Sanskrit Proverbs*

This series of broadcasts is intended to explain and illustrate Sanskrit proverbs inculcating good habits.

- (i) Face calamity with patience; display forgiveness in prosperity.
- (ii) A lover of books becomes learned.
- (iii) He who causes suffering to another is sure to suffer himself.
- (iv) Intelligence is strength.

(12) *Speech Training in Hindi*

- (i) Vocalisation of letter-sounds
- (ii) Vowel sounds
- (iii) Consonant sounds
- (iv) Accentuation
- (v) How to pronounce letters and words
- (vi) Modulation in speech

(13) *Careers for School-Leavers*

- (i) Medicine
- (ii) Education

- (iii) Engineering
- (iv) Mechanical trades

(14) *Stories*

- (i) Rana Sanga
- (ii) Rana Pratap
- (iii) Shivaji

(15) *School Magazine*

(16) *Debates*

(17) *Quiz Programmes*

(18) *The Radio Teacher*

The Radio Teacher will answer questions asked by student listeners.

(19) *The Week in Retrospect*

(20) *They Serve the Country:*

The Sailor, The Soldier

(21) *Story behind the Headlines*

(22) *Community Singing*

The schedule was reviewed by the Chief Producer of Educational Programmes at the Directorate General, A.I.R. He offered the following comments and asked the station to incorporate the suggestions before finalising the schedule.

Comments and Suggestions of the Chief Producer

General

In preparing schedules, thought should be given to one point, *viz.*, that the subjects selected should be amenable to the radio medium. Broadcasts which need elaborate visual support should, as a rule, be avoided. In selecting talkers, care should be taken to see that only those having first-hand knowledge of the subject are commissioned. Broadcasts by persons, who draw all their knowledge from books, cannot be very convincing and will not make good listening.

Specific Criticism of Series

ARCHITECTURAL STYLES

The range of the series is a bit too wide. Listeners will not find it easy to follow, much less to retain the subject-matter. A series of this type, unless supported by ample visual aids, has not much chance of success. If the station can produce folders giving pictures illustrating different styles of architecture, the series may be retained, otherwise it may be deleted. Listening alone will not give the students any idea of the different styles of architecture. The number of broadcasts in the series could be reduced with considerable advantage. It will be difficult to sustain interest in this series, if it extends over nine talks. The first three talks, it is suggested, may be combined into one; so may the 6th and 7th and the study may be made comparative. Similarly, the 8th and the 9th could also be combined. That will bring down the number of broadcasts in this series to five, and make each broadcast more compact and self-contained. It will also facilitate selective listening.

Among talkers listed, there is no architect. It is suggested that a competent architect may be booked for the broadcasts. It should not be necessary to distribute broadcasts in the series among a number of different broadcasters. That will make for overlapping, which should be avoided, and there is also the risk that if attempted by different persons, their viewpoints may not always agree.

STORIES IN VERSE

For the success of this series, it will be necessary to book a person having a cultivated radiogenic voice. The broadcast should be related to creative activity at the listening end. The stories may be dramatised by listening schools; and schools may be encouraged to send dramatised version of the story. The best attempt may be put on the air in the next term.

READINGS FROM ENGLISH PROSE AND POETRY

The passages and the poems selected have not been indicated. This should be done immediately. In their absence, it is difficult to offer criticism or opinion. The programme should be pre-recorded after thorough

rehearsing. It should be entrusted to a person with sound knowledge of and training in phonetics.

GREAT SCIENTISTS AND THEIR ACHIEVEMENTS

The broadcast may be confined to 'Science in the Service of Medicine and Surgery'.

UNION PARLIAMENT

The broadcasts on the working of Parliament could be featurised. You could have a mock-session of the Parliament, or you could introduce recordings from the speeches of a few parliamentarians and make it a sort of actuality programme. Transcriptions could be supplied by the Headquarters.

RECREATIONS

This series will not be easy to put across on the radio, particularly, the first two and the fifth, on 'magic tricks'. It will be necessary to recast the series. It would be wise to leave them out altogether.

SCIENTIFIC EXPLANATION OF PHENOMENA

The title may be changed to 'How and Why of Things'. It is always good not to appear pedantic.

OUR MAJOR PROJECTS IN BIHAR

Series of this type should be fitted into the larger perspective of the country as a whole. We may take 'flood control' and irrigation projects of India and include those of Bihar as well. That will incidentally promote a wider vision and a more correct perspective. Listeners should be enabled to see the picture of the country as a whole and not merely as of a collection of States, in a state of comparative isolation.

SPEECH TRAINING

The broadcasts should be pre-recorded, of course, after repeated and careful rehearsing. If they turn out to be really good, they can be put out by other stations as well.

COMMUNITY SINGING

Songs should be selected and their texts given. They should be set to music and pre-recorded.

These comments were sent to the station and the station sent the following reply:

General: Comments have been noted.

Architectural Styles: Comments have been noted. Some of the styles of architecture will be illustrated in our pamphlet. The number of broadcasts in this series has been reduced and the talks combined as suggested. Effort will be made to include an architect in the panel of talkers.

Stories in Poems: Capable persons will be utilised for the broadcasts. Effort will be made to get them featured by listening schools after broadcast.

Outstanding Poets of Some Indian Languages: The series has been amended as suggested.

Scientific Explanation of Simple Phenomena: The title is being changed as suggested. Talks nos. 4 and 5 have been combined as suggested.

Talk No. 7 is however being kept as a separate talk as the principle involved is different.

Union Parliament: It is felt that for featuring the talks in the series as suggested, speeches made by the parliamentarians outside the houses of the Parliament are not likely to be of much help. As recordings of speeches made on the floor of the house cannot be had it is proposed to have straight talks. It may be mentioned that the series, in its present form was duly approved in our schedule for the term November-December, 1957.

United Nations and Its Specialised Agencies: To make it more suitable for students, talks nos. 7 and 8 are being dropped. A talk on United Nations Organisation has already been included as the first broadcast in our proposed schedule.

Indian Basic Industries: Talk No. 9 is being dropped as suggested.

Recreations: The series is being dropped.

Our Major Projects in Bihar: The series has been amended as suggested.

Speech Training: Comments have been noted; we have included another talk on speech-making where points about phonetic and orthographic scripts will also be discussed.

Stories: The series has been planned as per instructions laid down in the Directorate Memo. No. 26(9)-P3/57 dated 17th November 1957. Persons whose names appear in the panel, shown under the series, being good writers, will be invited to write the scripts.

Community Singing: Comments have been noted for future guidance.

The Next Step

The Station then proceeded to the printing of the pamphlet. Some stations bring out two, and some three, pamphlets, one each term. Patna Station was not able to send pamphlets to the schools well in time. The pamphlet also contains, among other things, 'Hints for Effective Listening' and suggestions for follow-up work. Book lists for further reading are invariably added. Lists of films and filmstrips to support the sound broadcast, are frequently given. The pamphlet contains a few diagrams and illustrations but the written matter predominates. The school broadcast pamphlets are sent to listening schools free of charge. For some time, the practice was to send them to the Education Directorate for distribution. With the registration of schools by stations, the pamphlets are now mailed direct to the registered schools. The whole question of supporting literature to back sound broadcasts is being examined and a plan to put out copiously illustrated folders, supporting different series, and separate notes for teachers, is under consideration. Planning of schedules for the whole year will soon replace the current practice of termly schedules.

The 'case history' of the schedules of school broadcasts of Patna Station for the term January-March 1958 should have given some idea of the nature and content of broadcasts as well as the care and thought that go into the planning of broadcasts to schools.

CHAPTER IV

BROADCASTS TO SCHOOLS: THEIR PLACE IN EDUCATION

Broadcasting—A Pervasive Influence on Twentieth Century Civilisation

Broadcasting is a pervasive influence in the twentieth century civilisation. It moulds our tastes and outlook. It is a powerful instrument in forming and informing public opinion. Radio is an informal educational institution. to which all, whatever their ages or qualifications, have access. In our country, however, Radio has not yet succeeded in establishing itself as an accepted aid to education, much less as a medium of education. Radio is still the magic box of entertainment, and largely serves as background music to the picture of sophisticated living.

Air Time and Money spent on Broadcasts to Schools

All India Radio spends approximately Rs. 300,000 per annum on school broadcasts. And, if we add up the time devoted to such programmes by the twenty-one stations originating or relaying school broadcasts, it would come to 1300 hours in the course of one year.

Listening in Schools : Absence of a Class of Professional Broadcasters

These figures are impressive, but not so large as to justify either complacency or pride born of a sense of achievement. In fact, A.I.R. is, occasionally, seized with a feeling of frustration. Educators do not seem to wish to make any extensive use of this instrument of great power and potential. Many do not even know what thought and effort go into the organisation of the service and the scheduling and production of programmes. Neither the significance of the Radio in the arts and sciences of communication, nor its instructional potential has yet dawned on the vision of educationists and educational administrators. In the American academic world, radio has become

not only a useful teaching tool, but a phenomenon of many a facet for intensive university-level study. American universities are not only teaching through broadcasting, but teaching broadcasting and teaching how to teach broadcasting. In fact, broadcasting has become a profession in the United States of America. In our country, it is at best a side-line, people turning to it occasionally to oblige the broadcasting organisation or to have the satisfaction of being on the air and, possibly, of being heard on the radio by large invisible audiences. Often, their effort reveals complete lack of understanding of the characteristic peculiarities of the medium. Again, there is no professional organisation bringing together people interested in broadcasting like the National Association of Educational Broadcasters of U.S.A., where scores of men and women, young and old, have chosen to 'broadcast education' as a career. The N.A.E.B. has a Placement Service helping employers obtain the services of competent broadcasters. Very little has, so far, been done to bring about the birth of a profession, as distinct from a class of service men dedicated to making newer, better and nobler uses of the electronic media.

Teachers and Broadcasters

Practising teachers are not yet clear about the aims and purposes or the methodology of school broadcasts, much less are they convinced of their value. No doubt, here and there, some enterprising teachers, capitalising the novelty value of radio as a means of motivating student interest, have begun to use radio programmes for classroom listening. Such teachers quickly discover that broadcasts provide a convenient access to a wide variety of sources of new, up-to-the-minute information and provide interpretations and illustrations, which could be used to enrich the whole content of classroom instruction. As occasional and amateur broadcasters, teachers find it difficult to shake off classroom mannerisms or to modify classroom techniques to suit the medium of sound broadcasts.

Official Recognition of School Broadcasts

In one State, school broadcasts have been officially recognised. The Andhra Pradesh Education Department has, by a recent order, made it obligatory for schools to listen to the radio programmes for schools from Hyderabad. In a way, this is very encouraging. But, it is a pity that

a compulsive order should have been necessary to enforce listening to broadcasts in schools. Somehow the attitude in our country is that things will only be done under a directive from authorities. Educational value and intrinsic significance of things do not evoke interest or gain attention. It is, however, encouraging to know that teacher training colleges have begun to take notice of school broadcasts as a valuable aid to the teaching craft.

Distrust of Old-Timers

In some States, broadcasts to schools are still viewed with distrust. Headmasters and old-timers are inclined to regard them as an intrusion, a wanton waste of time! And, the more charitable among them regard them as a superfluous luxury. Whenever the question of timing school broadcasts is discussed with educational authorities or with heads of schools, one gathers the impression that broadcasts are not welcome, they are only suffered. With excessive emphasis on examinations and with narrow and short-sighted views regarding the purpose of education, anything, which does not directly promote learning for success in examinations, is not accepted. The teacher, having his eye always on percentage of successes in examinations, is constantly casting about for short-cuts. He does not seem to understand that the so-called short-cuts cut many things short—at any rate, they cut education short. In education the process is as important as the result; and often the longest way round is the shortest way home. By taking the student listener into allied areas of knowledge and thought, we succeed in giving him mental footholds and appetite for learning and a way of inquiry and investigation, which places at his disposal instruments for widening his knowledge as also the skill to apply it. Information memorised by the list, and conned up from the teacher's notes seldom takes root in the memory. Conveyed through an experience such information sticks and grows in the memory.

The Purpose of Broadcasts to Schools Recapitulated

"What exactly is, or should be, the purpose of broadcasts to schools" is a question which can be asked again and again. And the answer to this question will decide how best these purposes can be achieved? Often catch phrases and clichés are trotted out in answer. But, catch phrases have a way of sending our thinking to sleep.

First and foremost, good educational programmes set up, or at any rate, should set up standards of speech and performance, for students and teachers alike. In the second place, they should mitigate some of the defects of over-regulated and over-graded schooling. Lastly, school broadcasts should provide something fresh in the way of information and treatment.

The Contribution of School Broadcasts to the Content of Education

Education is passing through a period of rapid change. New syllabuses are being planned, new curricula and courses of study are being tried out. Elaborate procedures are employed by committees of experts to produce syllabuses. Ordinarily, these syllabuses give the barest outline. They list topics, subject-wise. To many they remain empty phrases. The content of the topics is determined largely by the writer of textbooks and by the competence and background of the teacher. Often, textbooks mutilate, and sometimes, translate out of shape the intended content of the syllabus. And, the teacher may not always have the scholarship and breadth of vision to develop topics in the syllabus into communicable pieces of knowledge, or to relate them to the earlier experience of the age-group and the individual. As a rule, the conventional school curriculum is worked round a systematic array of subject-matter neatly divided and sub-divided into heads and sub-heads. Broadcasts to schools, on the other hand, not only work out the schedule, but develop the titles of programmes into listenable and entertaining experience.

Broadcasts adopt a problem approach to the communication of knowledge. As mentioned before, they are developed round an interest or a real-life or a near-life situation. They do not deal with knowledge theoretically or compartmentally. Ideally, radio programmes to schools should be life-centred and not merely subject-centred. Their purpose should be to promote larger and deeper understanding, to give habits of observation, to stimulate inquiry and investigation and to vitalise imagination. They should help counteract the narrow outlook common in schools.

School Broadcasts and Curricula and Courses of Study Re-examined

As to what the school broadcasts contain and how they are related to and at many points linked up with work in

the Secondary schools can be seen from the school broadcasts of West Zone originating from Bombay for the term 20th November, 1957—18th March, 1958. Bombay station puts out broadcasts on Nature Study, Science and the Community, on History, Geography, Language and Literature. In addition there are general broadcasts. Those who followed these broadcasts would have noted that a balance was struck between different subjects, and knowledge was communicated through the study of our immediate environment and discussion of everyday problems, emphasizing the social relevance of knowledge. Straight talks, dialogues, discussions, illustrated talks and features, each in their own way, give colour and force and life to Radio programmes for schools.

Those interested in broadcasts to schools frequently ask themselves and others, 'Should broadcasts to schools be tied up strictly to the syllabuses and curricula and courses of study?' The question is more easily asked than answered. A point that can help us reach some sort of satisfactory answer is that syllabuses are not an end but a means—a means to enable the pupil to grow to the fullness of stature by the exercise of his own unique faculties. Syllabuses are devised to offer disciplines, give certain skills and help the pupil make and do certain things. They should also enable the young listeners to discover more about the world and themselves. And, that is precisely the purpose, which school broadcasts set before themselves. Whether they strictly follow the syllabus, topic by topic, or not, they are broadly conceived to promote like purposes and there should be no fear or suspicion of school broadcasts being yet another task added to the many tasks which the poor teacher is expected to perform, or of any conflict between the two. If not providing some new information, the broadcast presentation often rearranges the content of the curriculum in a new pattern—it takes cross sections and panoramic surveys of the subject to enable the listeners to see the march and sweep of events in clearer perspective. For instance, programmes on civics would give clearer perception of the story of the 'rule of law' in different stages from the law of the jungle to democracy, where men govern themselves through their chosen representatives and laws made by them. The story of 'lighting' will, similarly, comprehend all phases of the development of artificial lighting from torches to the flash and neon lights of today and the radioactive lamps of tomorrow. In fact, school broadcasts

can, in the hands of a thoughtful teacher, become a labour-saving and time-saving device. Broadcasts to schools should bring infusions of new life into the curriculum itself and should help break down the compartmentalisation of knowledge that goes with subject syllabuses. The rigidity of division between subjects and different classes would also be mitigated. They further help correlate knowledge and skills to the immediate needs and the natural environment of the learner.

Radiogenic Subjects

Some subjects and some aspects of subjects lend themselves more easily to the radio medium. Subjects like General Science and Science in relation to social needs lend themselves admirably to the medium of broadcasting. Broadcasts on the history of social progress in consequence of technological advances will make the study of Physics and Chemistry, Botany and Zoology and social sciences more interesting and more meaningful. Scattered beads of facts and information are strung together as integrated knowledge, having social relevance. But, broadcasting cannot take the place of work in the laboratory, or for that matter, of work in the library. These disciplines cannot be circumvented or short-circuited. Skill subjects are not, as a rule, radiogenic.

Need for Continuous Experiment

The relation of school broadcasts to curricula and courses of study cannot be laid down once for all by an armchair decision. It must remain an area of perennial experiment. Significant results seldom flow from simple formulae and both the teacher and the broadcaster will have to observe and experiment, to register results and accumulate experience. Calcutta is trying out the idea of relating broadcasts to the class-by-class requirements of syllabuses for the Middle schools in West Bengal and the results should give us material for thought and action. But, insistence on narrow and rigid tying up of school broadcasts to school syllabuses is bound to take away from them the merit of flexibility; and will, in turn, reduce their utility. Broadcasts to schools should ideally work in a field, *where classroom instruction cannot, from the nature of the subject, be adequate.*

The Enduring and the Universal

School broadcasts aim at discovering the enduring and the universal in educational situations. They are a way of educating the teacher as much as the pupil. In the aggregate, school broadcasts work out a new pattern, a sort of 'School of the Air', having its own distinctive character and making its contribution to the improvement of the content and quality of education. At any rate, they should not perpetuate mistakes, which in the past, have throttled progress in the accepted instructional procedures.

Textbooks and Radio Programmes

Like textbooks, broadcasts provide the starting point, as also the sustaining bases of those activities and processes, by which educational ends are sought and reached. Textbooks cannot give the pupil all that he needs. In fact, they only provide texts for lessons and occasions for the teacher to draw upon his own experience and his own fund of knowledge to illustrate and illumine the learning processes that lead to understanding and assimilation, and finally to the appraisal of a position or a proposition. In the same way, broadcasts depend very largely on the competence and imagination of the teacher guiding listening. Skilfully handled, listening to programmes should lead to discussion among student listeners and between the teacher and the class. Concentration and listening skill vary from individual to individual—some are more audile and some less. The more audile among them will share their listening experience with others. There will be exchange of notes. Cardinal points will be sifted out.

Educational value of such activity needs no elaboration. Interested groups will be formed at different levels. Discussion and recollection (two processes of immense value in all learning) will flow beyond the school, into the play-field, the reading-room and the cafeteria. Mental horizons will begin to widen.

In-Class Listening

Broadcasts to schools are devised to be listened to in class under the guidance of the teacher. It is not wise to combine classes or to listen in an auditorium. That impairs the classroom atmosphere, so essential to learning. Of course, listening in mass has its own place in

in-school listening. Student-participation programmes and school-made programmes and programmes on current affairs can be listened to in assembly and enjoyed in a crowd. But, programmes specifically tailored for an age-group and addressed to a class should be listened to in the classroom under the guidance of the teacher, who has had some training in the organisation of listening and utilisation of broadcasts by well-planned preparation and follow-up.

The New Role of the Teacher

In guiding listening, the teacher drops the role of the instructor, the oracle of all wisdom. Like the pupils, he is receiving the impact of a new experience. He is listening *with the class*—he is not there to supervise listening. He is not invigilating. He becomes a fellow participant. The class and the teacher come nearer one another—the distance is abridged. The teacher now assumes a new role. He diagnoses, encourages and guides. During the broadcast, he does not interrupt—he resists the temptation to unbutton his own wisdom. He is a fellow-listener and this sense of fellowship can be exploited to promote a co-operative effort in learning. Being taught is irksome. In fact, if teaching is made too obvious or obtrusive, it produces psychological resistances, which hamper the transfer of knowledge from the teacher to the pupil. Learning together makes it an exciting and memorable experience and promotes comradeship which grows in reminiscence. A good programme is not merely listening material—it is a plea for participation and the beginning of class projects.

Critical Attitude in Learning

One aspect of educational programmes holds out a promise of great significance. Ordinarily, the teacher induces in the class a receptive, often too receptive a mood. Criticising teacher's work by the pupils smacks of irreverence and can be a source of irritation and annoyance to the teacher. Broadcasts, on the other hand, are impersonal. They can be torn to pieces without any such risks. In fact, the teacher may lead the criticism and with the help of the class sort out the spurious from the genuine, significant from the superfluous, and the good from the indifferent. Such a practice will give opportunity to the class to learn the skill of critical appraisal of facts and

information. A school broadcasting service should have reason to congratulate itself, if it can aid the growth of critical attitude in learning.

Success of Programmes

Granted intrinsic worth of programmes, their success and utility depend on the way the teacher handles them. No cast-iron rules can be laid down or formulae given for the utilisation of broadcasts. It is for the teacher to develop the points suited to his own particular requirements and related to the experience and background of the listeners. Teachers can make listening educationally effective if they understand the principles of their utilisation.

Each broadcast has, so to speak, three parts: (i) the preface, (ii) the broadcast, and (iii) the conclusion.

'Preface' is the preparation, and 'conclusion' is the effective follow-up. The follow-up activities will depend on the nature of the broadcast. Some of the things that may be attempted are listed below:

(a) The class may be asked to draw maps and make charts, illustrating the subject-matter of the broadcast.

(b) Have a short quiz on the subject-matter of the broadcast; care should, however, be taken to see that it does not become a formal examination.

(c) Have the class write a letter to the Station Director telling him what they think of the programme.

Take care, however, not to spoil the pleasure of the listening experience by too great an insistence on formal follow-up work. Things should not, of course, be left to chance. It is better to be fastidious and conservative than to fail through excessive optimism or reliance on one's resourcefulness. Think out your plans afresh for each listening.

Utilisation of School Broadcasts

Selective Listening

Programmes in school broadcasts, generally speaking, have a rich and varied menu, but it is neither wise nor necessary to have every dish. That may, in fact, cause indigestion. You have to pick and choose; and a great

deal of care and thought will have to be exercised in your choice. Most stations have half-hour programmes for each age-group. The half-hour is generally distributed among two broadcasts of twelve minutes each with a musical interlude of five minutes or so. Ordinarily, the two broadcasts belong to two different series and have nothing in common. The teacher will be well-advised to arrange the listening to only one of the two and utilise the rest of the period for preparation and follow-up. The effort, no doubt, is to make each broadcast self-sufficient. But, it gains by listening to what precedes and what comes after. It will, therefore, make listening more profitable if the whole series is listened to without interruption. Selective listening should not, in any circumstance, imply tearing away a broadcast from the series. But, of course, you can select the series.

Compactness of Programmes

The teacher is sometimes dismayed by the short duration and compactness of programmes directed to classes. Ordinarily, programmes are of ten to twenty minutes' duration, while the school time-table has periods of thirty-five to forty minutes' duration. He wonders how he is going to fill up the rest of the time. A little thought, or, perhaps, a little knowledge of the technique of utilising school broadcasts, will end this puzzlement. Broadcasts to schools are intended for organised listening under the guidance of the teacher. And, it is necessary that the teacher should prepare himself and the class to receive them.

Hints for Organising Listening

At the beginning of the term, it is best to discuss radio listening in a staff meeting and to work out a schedule for each class. Division of work among teachers is generally found helpful; different series could be studied by different teachers and preparation for listening and follow-up work should be entrusted only to the teacher interested in the series.

The same class may not listen everyday, if selective listening is possible. Listening, however, should become part of the day's programme of the school.

Keep a radio log or a radio diary in every class. Interest in listening to broadcasts will grow, if exercises

and essays set to the classes are related to the broadcasts.

If the subject-matter of the broadcast is related to some educational film available in the school or the state library, opportunity should be taken to show the film, before or after the programme.

Study school broadcast pamphlets for background material and suggestions for further reading and follow-up work.

Preparing the Class to listen to a Programme

Study aims and contents of the series and of individual broadcasts and plan your preparation in accordance with the requirements of the thought-content of the broadcast. Preparation can be under three headings: *teacher preparation, class preparation and classroom preparation*. The teacher should acquaint himself with things needed to enrich the pupils' experience. Class preparation will consist in relating the content of the broadcast to the work done before, as also to the work that the class is expected to do in the remaining part of the term. If the programme happens, by chance, to coincide with what is actually being done in the class, preparation will mean little more than turning the thoughts of the class in the direction of the subject-matter of the programme. Class preparation should also awaken anticipation of what is to come.

Classroom preparation will comprehend display of maps and charts which illustrate the subject-matter and writing on the blackboard of new and difficult words and unfamiliar names of persons and places. A few cardinal listening points may also be listed. Discuss with the class the main theme of the broadcast. Have the class suggest questions they would like answered by the broadcaster. Organise committees and groups to work out some particular aspect of the material presented by the broadcast. *Be careful, however, not to overdo class preparation. Unless the broadcast has an element of freshness and novelty, the listeners are likely to lose interest.*

Suppose, for instance, that the broadcast has for its subject the story of the exploration of a certain part of the world. A wall map should be hung up and places mentioned in the explorer's adventures should be located by students at the end of the broadcast. The teacher should also help. He could tell them a little about the modern routes and

compare them with the route followed by the first explorer. Pictures and models of sailing vessels, then in use, could be displayed, so that the broadcast becomes a richer and fuller experience co-ordinating what the ear hears with what the eye sees. While supporting visual aids should generally be welcome, too much reliance on them may weaken the aural side. Some of the best books of fiction are not illustrated. The author creates word pictures, which live and grow in the memory. Characters and episodes in fiction have become part of human experience of men and affairs. Similarly, a good broadcaster can overcome the inherent deficiency of the 'sound broadcast' by clever scripting. A good broadcast is one that can stand on its own feet and does not depend too much on its partnership with pictures.

Factors that determine the Quality and Educational Value of Programmes

Timeliness

The quality and educational value of programmes depend on a number of circumstances. In the first place, programmes should be timely and seasonable. Broadcasts on 'Nature Study' should be related to what can be observed around us in that part of the year. Study of stars should be related to the stars and constellations visible in the sky at the time of the broadcast.

Fixed-Title Programmes

Broadcasts to schools gain by having an inner core of 'permanent provision'—programmes on subjects of perennial interest which need not vary and can be repeated in the original or in improved and amplified form. Such programmes should have for their subject some of the questions which occur and recur and ever seek an answer from the searching mind. "How things began?" and "How they work?" are titles under which numerous programmes can be developed, adding to the pleasure and profit of school audiences.

Value of Criticism

The quality of programmes depends, very largely, on the quality and helpfulness of criticism. Criticism helps the broadcaster keep his feet on the ground. Unless he

knows the reaction at the listening end, he is apt to lose touch with the needs of the listener and may land himself into a position in which he is just broadcasting to himself. Of spontaneous and vagarious criticism, there is no paucity. To be helpful, criticism should not merely be praise or dispraise—out and out commendation or downright condemnation. The critic should suggest alternatives, and substitutes for things, that mar or weaken the broadcast. The broadcasting service is always anxious to gather listeners' reactions and respects their views. Evaluation report blanks are invariably included in the school broadcasts pamphlets sent to listening schools. Evaluation report form will be found in Appendix 'B'. A simplified evaluation report is now being evolved and a postal survey will soon be instituted. Organised and intelligent criticism of school broadcasts is the only way to improve the quality of programmes. State Departments of Education can be helpful in collecting the listening-end reactions. Teacher Training colleges could, with profit, make listening to school broadcasts a part of the training given to graduate teachers. It should be on the same lines, on which lessons given by pupil-teachers are criticised and improved. Such criticism can provide a practical basis for the reconstruction and improvement of broadcasts to schools. Directors of Public Instruction, Punjab and Himachal Pradesh have already issued instructions to Teacher Training colleges to organise listening to school broadcasts and to criticise and assess their utility as aids to classroom techniques.

Research in Programme, Planning and Production

Criticism, both spontaneous and organised, can, indeed, be very useful. But, it cannot take the place of research. Listener research is as yet very inadequate and educational research has not yet started giving the attention to radio programmes that they deserve. As long as research remains inadequate, improvement will not be very marked. Research departments of universities and of Teacher Training colleges could profitably study the impact of educational programmes and could give guidance to those responsible for the planning and production of educational programmes.

Programme Exchange : Internal and External

Exchange of programmes and the pooling of experience of different stations and organisations will be another

source of improvement. The school Broadcasting service of the A.I.R. at the Directorate-General has established contacts with the B.B.C., A.B.C. and the C.B.C.; and literature on school broadcasts as also scripts and transcriptions of outstanding programmes put out by them are being received regularly and are being studied and examined to find out how far they can be utilised or adapted to our own needs and purposes. Till recently, regional stations had been working in comparative isolation. With the establishment of the Programme Exchange Unit at the Headquarters, it will be possible for stations to gain by the experience of others and make use of worthwhile programmes put out by other stations. It will avoid unnecessary duplication of effort.

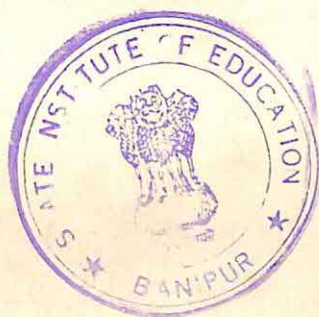
Danger of Undue Emphasis on Novelty

Undue emphasis on novelty and search for the strange, the uncommon and the wonderful, often lead to waste of effort and lowering of standards. Ordinary things, too, have their own charm and mystery and strikingly good programmes can be presented about things, which most of us are familiar with, but few of us care to study.

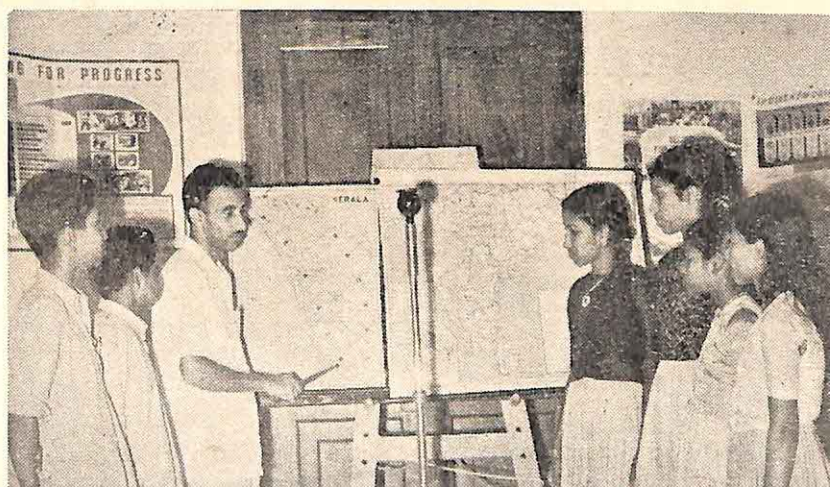
As a good story can be told and re-told, a good broadcast can be repeated to the same body of listeners as also to successive groups of such listeners.



A potter at work, illustrating a broadcast in the series 'How It Is Made'



Post-broadcast discussion in progress





A School Broadcast Consultative Panel discussing
schedule of broadcasts for schools

Supporting literature on school broadcasts for teachers and pupils



CHAPTER V

LIAISON WITH THE STATE DEPARTMENTS OF EDUCATION AND THE UNION MINISTRY OF EDUCATION

The Need for Liaison

Essentially, the School Broadcasting Service of All India Radio caters for the educational needs of schools and, must, consequently, keep in close touch with the State Departments of Education, the Ministry of Education, Government of India and above all with schools. To be really useful, this contact must not merely be official *but live, intimate and continuous*. Without it, broadcasts to schools run the risk of falling out of step with the educational needs of the special audiences to whom they are addressed.

Channels for the Maintenance of Contact

Some stations have educational supervisors, who visit listening schools and keep in touch with the State Education Departments, more particularly with its Audio-Visual Education Section, if there is one. Producers and Assistant Producers, who often visit schools to collect reactions of the guiding teachers and the listening pupils, give suggestions for effective listening and fuller utilisation of broadcasts. They collect suggestions for planning their own work. In August 1956, was appointed, at the Headquarters, Chief Producer of Educational Programmes. He is intended to be the channel for the maintenance of contact with the Ministry of Education and the State Departments of Education. He tours stations putting out educational programmes. Sometimes, he attends meetings of the consultative panels of stations. He meets State Directors of Education and Education Secretaries to discuss with them problems relating to the equipment of schools with radio receiving-sets, and speakers, and the training of Secondary school teachers in the installation, manipulation and maintenance of receiving-sets and utilisation of broadcasts to schools. As member of the

National Board of Audio-Visual Education, he has opportunity to share his own experience with other members of the Board and to give and receive suggestions for the promotion of the use of electronic media of communication. He represents A.I.R. in the All India Educational Conference and is a member of Committees set up by the All India Council of Secondary Education. He conducts courses for Secondary school teachers as also for teachers under training in graduate Teacher Training colleges.

Training of Secondary School Teachers in Utilisation of School Broadcasts: Short In-service Courses

For effective utilisation of broadcasts to schools, it is essential that teachers guiding listening, should have some knowledge of the working of the receiving-set and the organisation of listening, including pre-broadcast preparation and post-broadcast follow-up. In December 1956, All India Radio started a scheme of short courses for Secondary school teachers in the installation, manipulation and maintenance of radio receiving-sets and the utilisation of broadcasts to schools. Nineteen such courses have so far been held. The first course was held in Jullundur for fifty selected Secondary school teachers and educational administrators. It was followed by a similar course at Jaipur, prior to the organisation of the school broadcasting service from that station. In August and September, 1957 two such courses were held for teachers of the Delhi Administration. In November, 1957 a similar course was held for the first time for teachers-under-training as also for teachers-in-service at Govindram Seksaria Teacher Training College, Udaipur. Another course of the same type was held in Bikaner in Government Training College for Teachers. In April and May, 1958 one-week intensive courses were held in Trivandrum for teachers of Kerala, in Hyderabad for teachers of Andhra Pradesh, and in Bangalore for teachers of the reorganised Mysore State. Similar courses have since been held in Srinagar in September 1958, in Gauhati and Jodhpur in October 1958, in Solan in November 1958, in Nagpur in December of the same year, and in Ajmer under the auspices of the Government Teachers' Training College in January, 1959. In Ahmedabad, a short course for broadcasters and script-writers was held from 9th to 11th March

1959 and another such course for script-writers and broadcasters was held in Delhi from May 14 to 19, 1959.

The courses for teachers comprehend training in the mechanical handling of the radio receiving-set, its adjustment and maintenance, and the educational utilisation of the broadcasts. Playback of recorded programmes and reading aloud of scripts form a distinctive feature of these courses. Broadcasts to schools, which happen to be put out at the time, are listened to and criticised. Experience leads to the conclusion that greater emphasis should be on the practical side. These courses are now being organised more on the lines of a workshop, requiring participating teachers to produce programmes. These courses deepen awareness of the value of broadcasts and help liquidate many difficulties experienced by the listening schools. Interest in school broadcasts has been registering a marked rise, especially when teachers return to their work in schools after attending the one-week course or workshop. To give the reader a complete idea of the plan and purpose of these courses, a typical programme of such a course held in Trivandrum is added.

GOVERNMENT OF INDIA

ALL INDIA RADIO : TRIVANDRUM

Short In-Service Course for Secondary School Teachers o Kerala

April 15, 1958

- | | | | |
|-----|----------------------------|--|--|
| (1) | 11.00 a.m. | Radio Method in Education | Talk by Shri C.L. Kapur
Chief Producer, Educational Broadcasts, A.I.R.
New Delhi, followed by discussion |
| (2) | 12.00 noon
to 1.00 p.m. | Playback of selected transcriptions of school Broadcasts | |
| (3) | 3.00 p.m. | Fundamentals of the Broadcast Chain | By the Station Engineer |

April 16, 1958

- | | | | |
|-----|------------|--|---|
| (4) | 11.00 a.m. | Educational Value of School Broadcasting | Talk by Shri C.L. Kapur
followed by discussion |
|-----|------------|--|---|

- (5) 12 to 1 p.m. Reading aloud of selected scripts and playback of selected recordings

- (6) 4.00 p.m. Choosing a Radio Set : Its Installation and Maintenance By the Assistant Engineer

April 17, 1958

- (7) 11.00 a.m. Planning and Production of School Broadcasts By Shri Kainikkara M. Kumara Pillai, Producer, Educational Broadcasts, A.I.R., Trivandrum followed by discussion

12 to 1 p.m. Playback of selected records

- (8) 3.00 p.m. Teachers' Role in School Broadcasts Discussion led by Shri Rama Varma Appan Thampuran, D.P.I. Kerala.

April 18, 1958

- (9) 11.00 a.m. Form of Presentation and School Broadcasts By Shri Kainikkara M. Kumara Pillai, followed by discussion

12 to 1 p.m. Playback of selected records

- (10) 3.00 p.m. Listening to a school broadcast followed by discussion

April 19, 1958

- (11) 11.00 a.m. Integration of Class Projects and other Activities with School Broadcasts Talk by Shri C.L. Kapur Chief Producer, followed by discussion

12 to 1 p.m. Playback of selected records

- (12) 3.00 p.m. Training in Speech By Shri C.L. Kapur, Chief Producer

- (13) 4.00 p.m. Questions from the teachers attending the Seminar and answers by Shri C.L. Kapur, Chief Producer, Educational Broadcasts and Shri Kumara Pillai Producer, Educational Broadcasts and a member of technical staff, A.I.R., Trivandrum.

Training of Producers

Besides training of teachers, it is necessary to train those who work in the School Broadcasting Service of the Stations—Educational Supervisors, Producers and Assistant Producers of Educational Programmes. In December 1957, the production personnel met together for the first time in Delhi for ten days to discuss the techniques of planning and scripting of programmes for schools as also their studio production. The Seminar had the advantage of working under the direction of Mr. John Reed, Assistant Head of School Broadcasting, B.B.C., who had been invited by the All India Radio to conduct the seminar and to make available to A.I.R. experience of the B.B.C. in the field of school broadcasting.

Another such course was held in Delhi from 20th to 25th April, 1959. In this course, experience so far gained was reviewed and plans were prepared to schedule programmes for the whole year. It was decided in this seminar that each station should have a 'permanent provision' of programmes under titles which will not vary from year to year. The listeners will, thus, be able to anticipate what to expect in programmes under the selected titles. The titles are listed below:

- (1) People, Places and Things
- (2) The Family of Man
- (3) This is My Country!
- (4) A Story without an End: The Story of Human Progress
- (5) Lucky Mistakes that yielded a Harvest of Rich Results
- (6) Adventure of Living Together
- (7) Health Highways
- (8) Science and You!
- (9) Scanning the Skies
- (10) They, too, have a Story!
- (11) Stones Speak
- (12) The March of India!

State Departments of Audio-Visual Education

State Governments of Himachal Pradesh, Mysore, Andhra Pradesh, Madras, Rajasthan and Bombay have appointed Audio-Visual Education Officers and created units for the promotion of Audio-Visual education. The Madras Department of Education has very wisely given the lead to other States in appointing a State Radio Engineer. This officer advises schools on the purchase, installation and maintenance of radio receiving-sets. This step is of great significance, as in the absence of such an arrangement the maintenance of receiving-sets in schools becomes difficult. In fact, as noticed before, quite a considerable percentage of school radio receiving-sets are not in commission as a result of poor maintenance.

In U.P., the Education Expansion Officer is supposed to look after Audio-Visual education as well, but his other duties, which are both numerous and heavy, leave him little time for Audio-Visual education.

In the Second Five-Year Plan, the Ministry of Education, Government of India, has a scheme of Audio-Visual education which, among other things, provides a fifty per cent subsidy for the creation and maintenance of Audio-Visual Education Section in the State Directorates of Education and also on equipping schools with radio receiving-sets. By a recent decision, the scheme has been further liberalised and the ceiling on the price of sets has been lifted.

Liaison with Post-Graduate Teacher Training colleges can also be very helpful. Teachers under training could, with advantage, listen to broadcasts to schools and criticise them and assess their value as basis and occasion for class projects. If such listening becomes part of their training, the teachers will gain and the programmes will have the advantage of assessment by the teaching profession in its well-known seminaries. In the Punjab, graduates under training have been required to listen to broadcasts to schools and criticise them, as part of their training for the profession.

Radio Education as Part of Teacher Training

Universities and State Departments of Education have begun to realise the value of including some topics on

radio method in education in their courses of study for the B.T. and the B.Ed. examinations. The Punjab and Himachal Pradesh, Rajasthan and Madras have already included topics on 'broadcasting as an educational method' in their study of general methods of teaching. Other universities are considering it.

Educational Supervisors and Producers and Assistant Producers at stations frequently visit listening schools during listening hours to see that listening is organised on correct lines and under proper conditions. Often, they give guidance to schools in utilising programmes to better purpose. However, difficulty is still being felt in finding experienced and competent persons to fill the posts of Producers and Assistant Producers at the stations. Awareness of the possibilities of radio in education is rapidly growing. Listening to school broadcasts should, perhaps, remain voluntary, but wider use of this medium is necessary for further expansion of the service; and this can come through a closer liaison with schools.

Broadcasts to schools are usually introduced by a teacher of standing or by an eminent educationist. Another way of giving teachers greater awareness of the value of broadcasts is to have a few broadcasts specially addressed to teachers of listening schools. Bombay Station addressed broadcasts to schools on 'the new syllabuses and how to tackle them'. The State Director of Education, the Joint Director of Education and eminent headmasters were invited to broadcast.

Supporting Literature and School Broadcasts Pamphlets

All stations putting out school broadcasts publish charts and pamphlets and occasionally folders giving brief notes outlining the purpose and content of a particular series. Bombay publishes such pamphlets in English, Marathi and Gujarati, while other stations have them in the regional language of the area concerned. The charts and pamphlets are mailed direct to listening schools, registered with the station. The charts are meant to be displayed on the notice board, while the pamphlet is intended to help the teacher, who guides the listening, and the pupils who listen. So far, these publications are not priced and they are distributed free. Pamphlets contain notes for teachers, suggestions for preparation and follow-up and

also listening points for the students. Some of these pamphlets have become rather ponderous. It is, now, proposed to split up the pamphlets into 'Notes for Teachers' and 'Hints for Listeners'. The former will be primarily meant for the teachers guiding listening, while the latter will give listening points to the pupils. Schools will possibly wish to have a large enough number of these pamphlets to be able to place them in the hands of pupils. It is further proposed to have illustrated folders for selected series. Jaipur, Bombay and Delhi have already brought out illustrated folders in support of selected series.

The Broadcasts and the Printed Word

The sound broadcast must be supported by the printed word to be able to leave more fruitful and enduring impression on the minds of the listeners. So far, literature of this type has been slender in quantity and only moderately good in quality and not always timely. It has been largely due to the fact that till recently the school term was the basis of planning. Improvement should be possible now that schedules are being planned for the whole year. It is hoped that such literature will be in the hands of the listening schools, well in time, to enable them to plan their listening. The change will enable the stations to have ample time for the development and production of programmes, for the writing and editing of scripts, for rehearsing the performer as also for tape-recording the programmes. For some time past, these pamphlets have been having hints for effective listening, a blank registration form for schools wishing to be put on the mailing list and Evaluation Report blanks to enable schools to send back specific and concrete criticism of the programmes or series listened to by them. A simplified post-card evaluation report form is being introduced to give further facilities to listening schools to offer constructive suggestions for the improvement of the content and quality of programmes.

Radio Clubs

Some stations have started organising School Broadcasts Listeners' Leagues affiliating listening schools on payment of a fee of Rs. 10 per annum. The League will have a Publications Sub-Committee and the funds of the League will be largely utilised for the production and distribution of supporting literature of this type. Jullundur, Jaipur and Madras have already succeeded in forming the Station

affiliating School Broadcasts Listeners' Leagues. The constitution and functions of the League will be found in Appendix 'B'.

School Terms and Broadcasts to Schools

School broadcasts follow the school terms. Some stations have two terms, while others have three. Most of the stations have no broadcasts for schools during the summer months, while some of them have another break usually of a shorter duration about the months of October-November according to the school term followed in the particular region served by the station or stations. To quote an example, in Bombay-Poona-Ahmedabad-Baroda-Rajkot, the monsoon term begins in the third week of June and concludes in the last week of October. This is followed by a short break. The second term begins in the third week of November and lasts till the second week of March. During April, May and first half of June this region has no school broadcasts.

Out-of-School Broadcasts in Vacation

From the position outlined above, it is clear that there are some fairly long spaces of time, during vacation, when school-goers have no opportunity of listening to programmes specially addressed to them. To fill this gap, programmes for out-of-school listening are being put out by Jaipur and Trivandrum. Vacation should not as it often does, mean complete suspension of academic activity. Trivandrum Station has persuaded schools to form radio listening clubs, and students who have no receiving-sets at home are allowed to meet together, under a monitor, to listen to broadcasts put out during the summer vacation. The programmes follow the lines of an elementary course in general education.

Out-of-school listening can be developed to great advantage. In fact, in some of the more advanced countries, listening groups have been formed. Though listening is done singly by individuals, at their own convenience and in their homes, or in a friend's house, the group meets together to discuss the programme listened to. Mothers, elder brothers and sisters do often listen to these programmes and discuss their content among themselves in the family circle. This will help improve the general tone of conversation and discussion in the home. Domestic work

is, more or less, of a mechanical nature and while the hands are occupied, the mind is free to listen and to take in useful bits of knowledge from educational programmes. The experiment in Jaipur and Trivandrum is being watched and the scheme will be expanded if the experiment evokes good response.

The Timing of School Broadcasts

The fixing of time for school broadcasts is beset with difficulties. In some parts of the country acute shortage of accommodation has necessitated the double shift system in schools. Broadcasts must be repeated a second time during the same day if all must listen. Again, summer and winter hours of work vary from State to State. To these difficulties must be added another. In the present state of affairs, many schools are inclined to look upon school broadcasts as yet another task imposed on them and a strain to the already overloaded curriculum. In some States, the broadcasts coincide with the recess period or the lunch hour. Obviously the school authorities here seem to think that broadcasts to schools are at best a superfluity, which, if at all, students may listen to as a relaxation. In Lucknow-Allahabad, school broadcasts are put out from 1400 to 1430 hours.

The half-hour generally has two programmes of ten to twelve minutes each with a brief musical interlude. In Bombay, the broadcasts are put out at 1610 to 1630 hours and 1640 to 1700 hours. Each programme is of twenty minutes' duration. To put broadcasts at the end of the school time takes away a great deal from their value and importance. Improvement in the quality of programmes and greater awareness of the value of school broadcasts is bound to bring about a change in the attitude of listening schools.

In Trivandrum-Kozhikode, broadcasts to schools are put out from 1530 to 1600 hours. This, again coincides with the concluding part of the day's work in schools. At this time, students and teachers feel fatigued and are anxious to get back home.

Madras-Tiruchi timing seems to be the most satisfactory. The first broadcast is put out from 1230 to 1300

hours; and the second from 1410 to 1440 hours for High schools; and from 1450 to 1520 hours for Middle schools.

Hyderabad-Vijayawada have school broadcasts from 1540 to 1640 hours, two half-hour programmes.

Calcutta has its programmes from 1430 to 1500 hours, while Nagpur has them from 1350 to 1420 hours.

Jullundur puts out broadcasts to schools from 1400 to 1430 hours.

In winter, Delhi puts out its programmes for schools from 1200 to 1230 hours for Middle schools; and 1400 to 1430 hours for High schools.



CHAPTER VI

LISTENING IN SCHOOLS

Selection and Purchase of Radio Receivers and Extension Speakers—Difficulties Experienced by Schools

Often, schools have considerable difficulty in selecting listening equipment. Few, if any among the staff, know much about it. Even the science teacher, with all his knowledge of Physics, is not of much help! Station Engineers of All India Radio, if approached, give advice and guidance. Investigations show that although many schools have spent considerable sums of money on installing listening equipment, conditions for broadcast listening are often poor in the extreme. Frequently, the set is in the Headmaster's room, out of harm's way, no doubt, but the result is that it becomes inaccessible. Who will bother the Headmaster? And so, there it remains, an adornment for the room and a proud possession for the institution, but of little use educationally! On ceremonial occasions, it is taken to the classroom or to the assembly hall for listening in mass to selected programmes. So far, very few schools have extension speakers in classrooms. Even in cases where the schools have the receiving-set and the public address system, the speakers are of poor quality. Often, they are in the wrong position in the classroom. To ensure good listening in the classrooms, they have to have a volume control, which also acts as on/off switch. The classteacher can, then, adjust volume while putting on the radio at the required time. To be effective, speakers should be placed directly in front of the children, and not on a side wall. Certainly, they should not be high up near the ceiling. If speakers are attached to leads, they can be placed, when wanted, on the teacher's table. That would ensure more intimate listening conditions and make it possible to regulate the volume. Individual radio receiving-sets, if funds permit, should be provided in two or three classrooms. Schools will also be well-advised to consider the relative merits and costs of providing individual radios in classrooms as against

the merits and costs of the 'public address system'. In the case of 'public address system' a breakdown will mean interruption of listening in all classes, whereas if individual sets are provided this risk is automatically reduced. In U.K., the School Broadcasting Council held several meetings with representatives of firms manufacturing radio receiving-sets to work out a design suitable for schools. In the U.S.A., thinking on the part of leading Radio manufacturers and representative educators working in the field of Audio education led to the co-operative action of preparing for publication a summary of basic standards for school sound systems. Two small pamphlets 'The School Sound System' and 'Classroom Radio Receivers' contain the basic standards and specifications developed by the United States Office of Education and the Radio Manufacturers' Association Joint Committee for School Audio Equipment.

Selection of a Set

To simplify operational instructions, and maintenance, it is desirable to standardize on as few different makes and models as possible. The set should have good selectivity—it should be capable of 'separating' stations closely located on the dial. It should also be capable of picking up and amplifying satisfactorily the weak signals of stations, whose programmes are essential for the schools. When selecting a set, schools will be advised to buy at least two sets of each make and model of radio under consideration. In general, the best means of obtaining high fidelity reproduction is ensured by the selection of a proper tuner-amplifier loudspeaker combination.

The Tape-Recorder

The use of tape-recorder in Audio education should not be overlooked. Teacher Training colleges, especially those having extension services, do have tape-recorders. Better endowed schools should not find tape-recorder altogether beyond their resources. With the written permission of A.I.R., schools can tape-record programmes for strictly internal use. They can be played back, and, if necessary repeated to the class as and when needed. Such programmes as contain subject-matter of perennial interest can go into the school library of tapes. The tape-recorder can also make definite contribution to speech, language and music

teaching. Playback of recordings of students' efforts will help them in measuring their own performance against models of standard speech. A natural inflection can be mastered by the student, who can hear his own speech.

Acoustics of the Listening Room

Good reception does not depend upon the quality of the receiving-set alone. In fact, it depends quite as much on the acoustics of the room, in which listening is being conducted. Those responsible for planning and designing school buildings in the past could not have taken into consideration this new factor in classroom procedure. But the pity is that no thought is still given to this important development. Those charged with the responsibility of designing and constructing school buildings must consider problems connected with sound transmission and amplification. The size and location of doors and windows, the treatment of the wall space, the height of the ceiling will have to be related to the needs of in-class listening of sound broadcasts.

Some Idea of Costs of Acoustical Treatment

The acoustic properties of the classroom, if poor, may limit the effectiveness of the sound system, and seriously impair the utilization potential of the programmes, whatever their intrinsic quality. Acoustics largely is a matter of wall and ceiling treatment in all new constructions. Those charged with this responsibility must give timely thought to new and impending needs and procedures of education. Old school houses can be re-modelled and acoustically treated at moderate expense. Large areas of wall space with sound-absorbing surfaces struck on, will not alone achieve the desired result. Scientific application of sound absorbing materials with a few sound-reflecting spaces properly distributed will give a classroom, well-balanced, easy and effective listening—neither too 'dead', nor too 'reverberative'. The acoustic conditioning of classrooms—in fact of all parts of the school building—is a job, which will have to be entrusted to an experienced acoustics engineer. Amateur attempts will not do. A room 18' x 22' with ceiling 12' high could be effectively treated, with imported material, at an approximate cost of Rs. 2,000. In case indigenous materials are used, there could be a saving of some Rs. 300 bringing down costs to Rs. 1,700. The bigger classrooms 22' x 28' (floor area 616 sq. ft.) will cost

Rs. 3,000 with imported acoustic material and Rs. 2,250, if indigenous material is preferred. The calculated costs include ceiling battens and beam structure for false ceiling.

Where such acoustical treatment is not possible, results can be considerably improved by a little thought about the location of the receiving-set and the amplifier. The location of the loudspeaker in each classroom presents an individual problem for which no simple, easy and foolproof answer can be indicated. In no circumstances, however, should it be directed on a hard surface like plaster or glass. A curtain hung in folds will cut down unwanted echoes from a hard surface. Remember, too, that the more people there are in the classroom, the less the echo.

Schools buying listening equipment should obtain from the dealers a clear warranty covering the equipment under normal use for a year at least. In addition, an instructions manual containing complete wiring diagram and essential information for the care and operation of the equipment should be obtained with the equipment.

Installation of a Set

(a) *Aerial and Earth*

An inverted 'L' type aerial 30—40 feet above the ground will usually be found satisfactory to give good results. The lead-in from the aerial to the radio set should be as short as possible and may be screened to prevent local interference. The inverted 'L' type aerial would be most sensitive to signals coming in a direction in the line of the horizontal span coming towards the lead-in end. An outdoor aerial should always be preferred to an indoor one. In areas where there is considerable local interference, if a school is prepared to meet additional expenditure, it will be worthwhile to go in for some expensive and more elaborate types of aerials available in the market.

A good earth is an essential. While, ordinarily water pipe makes a 'good earth' since it usually takes a direct path into the ground, it is worthwhile providing a really good earth by burving a sheet of copper in soft and wet soil. *In no circumstances, should the radio-set earth be connected to the earth of the electrical installation in the building.* Any radio technician would be able to help in providing a sound earth. It may, here, be pointed out that a lightning arrester should be considered as an essential auxiliary to the aerial-earth system.

(b) *Operation and Maintenance*

The set should be operated only at the minimum required volume, which will ensure comfortable listening without distortion. It will, also, ensure safety of the loud-speaker. While tuning the receiver the volume control should be advanced just sufficiently to enable location of a radio station and once the station is located the volume control should be advanced to the degree of comfortable listening. The tone control, if provided on the set, should be kept on 'bass' while tuning; and, then, advanced to the required brilliancy.

The set should not be open to dust and insects. It is not a sound practice to place the radio set in a wooden box or in cloth covers during its operation because it would affect ventilation of the components. If one has to have precautions against insects and spiders, one could provide gauze of a close mesh at the back of the radio set rather than a cover. The aerial and earth should be frequently checked up and the copper plate earth, if provided, should be, periodically, watered to ensure that it is always kept wet. That should ensure maximum efficiency.

It is always wise to test your receiving-set early in the term. Then, each day you use it, tune in early and accurately, making sure that you eliminate distortion.

Servicing the Radio Set

Many schools put up with poor reception, possibly because it is not realised that reception can be improved. "It works" is not good enough. School broadcasts are not much good if the pupils have to strain their ears to listen or if there are frequent interruptions. Schools should have arrangements to have the set checked at least once a year. Some schools have found that summer vacation is the best time for such check-up. If you have to turn the volume up full to hear, you are overworking the receiver. *Volume should be kept half way.* In case your set is worked with battery, see that the used-up dry battery cells are replaced well in time. Some schools have a 'Radio Manufacturing or Assembly Group' working under the guidance of the science teacher. Such a group can be helpful in locating minor defects, if not in repairing them. Schools can also have 'operation-clinics' in which teachers and students discuss practical problems of operation.

Financing of Audio-Visual Education

The financial resources of many schools and States do not permit rapid development of in-school listening. Different State Governments have found different solutions for the situation. In the Punjab, the Director of Public Instruction has permitted schools to utilise accumulations in the Boys' Funds for giving schools 'listening-equipment', including loudspeakers in classes. In Andhra Pradesh, schools have been authorised to levy a compulsory fee of rupee one per student per annum for meeting expenditure connected with the purchase and maintenance of listening equipment. The Education Department of the Uttar Pradesh has permitted schools to levy a fee of rupee one per annum from pupils on the rolls of the institution. But the orders, being merely permissive, very few schools have actually levied the fee. In some States, schools have raised funds by holding *fetes* and concerts and by staging plays and arranging tournaments.

Ministry of Education Scheme of Audio-Visual Education

The Government of India, in the Second Five-Year Plan, have provision for schemes of Audio-Visual education. The scheme makes provision for a number of things connected with Audio-Visual education. State Governments can take advantage to establish Audio-Visual Education Section at the Education Directorate. The Scheme envisages the appointment of one officer, and two technical assistants, two or three clerks and typists and the needed complement of class IV servants. State Governments are entitled to subsidy both on recurring and non-recurring expenditure. The value of such a unit is obvious. It is, however, a pity that many State Governments have not yet taken advantage of the subsidy offered by the Ministry of Education. There is obvious lack of co-ordination between the State Departments of Education and the Ministry of Education.

There is also provision for the organisation of training courses for teachers at various levels. State Governments organising such courses are entitled to subsidy on the total expenditure incurred. These courses may be of varying duration from one week to two months. Each course shall be for not less than twenty teachers. Here, again, the pity is that many States have not, so far, taken much advantage

of the Government of India's offer, with the result that the financial provision on this item has, in the past, been lapsing.

Another part of the scheme provides for the establishment of State Audio-Visual Education Boards representing teachers, administrators, producers of audio-visual aids and equipment, and workers in the field of Social education.

Further, the scheme has provision for the establishment of audio-visual aids libraries, including libraries of tapes. It offers grant-in-aid on all expenditure, recurring and non-recurring. The value of such a library does not seem to have been clearly apprehended by the State Departments of Education. It can go a long way in making the use of radio broadcasts and educational films really beneficial to the cause of education.

Fuller utilisation of broadcasts to schools is promoted by a tape-recorder for recording programmes, and playback to classes at a time convenient to the school administration. Big educational centres can have a pool of film projectors and tape-recorders to go round the schools, if every institution cannot afford to buy one for itself. Another item in the scheme has provision for subsidy for Teacher Training colleges, which have provision for the study of audio-visual aids in education.

Besides what has been mentioned before, the scheme has provision for giving subsidies to schools and to State Governments, keen to buy radio receiving-sets and the public address system with speakers in classrooms. The original scheme has been enlarged and liberalised to include tape-recorders as well, and the ceiling has been raised. Schools and State Governments wishing to avail themselves of this part of the scheme have to make provision in their own budgets for the amount required for the purchase of equipment, and to claim re-imbursement of half from the Government of India. State Education Directorate is the channel of correspondence.

Finally, the scheme provides for the setting up of mobile audio-visual units. For this, the State Governments may purchase vans with the needed equipment and engage necessary staff for the maintenance and organisation of programmes in educational institutions.

CHAPTER VII

CONCLUSION : SCHOOL BROADCASTING IN OTHER COUNTRIES

In this concluding chapter, it is proposed to study the position of school broadcasts in the educational systems of some of the countries of Europe and America. The study fills one with the feeling, 'the petty done, the undone vast'.

School Broadcasts and B.B.C.

In the U.K., school broadcasts started some thirty years back, and these years have seen a remarkable rise in their professional status. Local authorities equip new schools, as a matter of course, with radio (and soon doubtless with television sets as well). Illustrated pamphlets published by the B.B.C. to accompany broadcasts sell nearly eight million copies in the course of a year. The school Broadcasting Service receives steady and growing streams of criticism, comments and commendation, not only from schools and Teacher Training colleges, but from the general public as well. 'School Broadcasting, in fact, is part of the educational landscape'.

This was not always so. Indeed, school broadcasts made *their name as good broadcasts before they began to make headway in schools*. It was the pioneer work of Sir Walford Davies in Music and Rhoda Power's brilliant demonstration of the power and appeal of the dramatic form of presentation, which put broadcasting on the educational map.

In the School Broadcasting Department of B.B.C. there is a team of twenty-four producers engaged in the planning, preparation and studio production of broadcasts. Most of them are graduate teachers, who have had considerable experience in the classroom, before joining the B.B.C. Their specialist qualifications match their responsibilities. Some are specialists in music and some in modern languages; some are experienced in teaching

children of a particular age; still others specialise in script-writing and studio production. The Department, apart from thirty-seven broadcasts, which go out to schools each week from London, prepares and publishes every year nearly fifty pupils' pamphlets and almost as many for teachers. A few scripts are written by the staff, but most are specially commissioned from free-lance writers, journalists, or teachers, who have talent for writing in the radio art form.

The School Broadcasting Unit of B.B.C. has a group of actors of versatile talent, who take on a large variety of parts. A producer can also call upon any other actor or actress, he wants, for more important parts.

The School Broadcasting Council

The School Broadcasting Council, by means of its various programme committees, and its permanent staff of educational officers, serves two purposes. It lays down the general policy of the programme planners and provides the listening-end study, which serves as the basis for programme assessment. It provides the needed guidance of responsible educationists. The School Broadcasting Service of B.B.C. is a real and effective partnership of the Broadcasting Service and the teaching profession. In such a partnership the problem of keeping general control of the educational policy of school broadcasts without interfering too directly in programme building is both difficult and delicate. Generally speaking, producers work best if left alone to get on with the job: if left too severely alone, they may, however, forget the needs and the capacity to assimilate of the audiences they are supposed to be broadcasting for. The solution is to have an agreed document—called a commission—for every series. The 'commission' sets out in general terms the policy of the series, the age and ability of children for whom it is intended, its educational aims and the method and form of presentation.

Comparing the organisation and working the School Broadcasting Service of B.B.C. with what has so far been attempted by A.I.R. one notices that though stations putting out broadcasts to schools have consultative panels, the Directorate at the centre does not have the guidance and cooperation of a body like the School Broadcasting Council of the U.K. The value of such a body is obvious and the

question of setting up a Central Council is being considered. The question of having a company of versatile actors to help in the central production of programmes will also need examination.

School Broadcasting in Canada

In Canada, School Broadcasts are the joint responsibility of the Federal and the provincial organisations. The C.B.C. cooperates with the provincial departments of Education, through their appointed heads of School Broadcasting to provide a pattern of school broadcasts that are carried throughout the length and breadth of Canada. More than twenty years ago, experimental school broadcasts were operating spasmodically in various parts of Canada, notably in British Columbia and Nova Scotia. Impressed with the success that appeared to be rewarding these efforts, the C.B.C. moved to set up a National Advisory Council on School Broadcasting with representatives from educational bodies right across Canada, and through it to provide a programme of national School Broadcasting. The Council has been meeting regularly and has worked out a pattern of broadcasts that seems to be a practical answer to the varying problems that are faced in different parts of the country. The service has also been instrumental in giving to young listeners a deeper sense of Canadian Unity—a task, which should be undertaken by a national school-broadcasting service of A.I.R., in addition to the regional services from sixteen stations serving various language areas. The C.B.C. has a school broadcasts department of its own under a Supervisor of School Broadcasts. The present incumbent of this office is Mr. R. S. Lambert, formerly of B.B.C. The Canadian Broadcasting Corporation presents, with the advice of the Advisory Council, a series of national broadcasts each year. The remainder of the school broadcast time is allocated to the provincial authorities.

At the provincial level, the general *educational content of the programmes is held to be the responsibility of the educational authority, the broadcast quality, the responsibility of the radio authority.* In most cases, there is an educational director responsible to his Provincial Department of Education to look after the content of the programmes and a producer responsible to C.B.C. to mind

its radio quality and effectiveness. This division of labour ensures effectiveness.

Position in India and Canada : A Comparison

The position obtaining in India is marked by comparative indifference and aloofness of the State Departments of Education, and though the Ministry of Education, Government of India has repeatedly drawn the attention of the State Departments of Education to the utility of school broadcasts, the response, speaking broadly, has not been encouraging. The Union Education Ministry's scheme of subsidy has not been taken advantage of by many States. Only Andhra Pradesh and Himachal Pradesh have shown some keenness to make broadcast a part of the educational system. Andhra Pradesh Government has made listening to school broadcasts compulsory, but they have yet to appoint a supervisor. In Canada from October to May, half-an-hour, each school day, is provided for school broadcasts. The school year in Canada begins in September and lasts until the end of June. This means that school broadcasts are available for the school year with the exception of a month at each end. It may also be mentioned that there are two types of broadcasting organisations in Canada. In addition to the C.B.C. there are many independent commercial stations. Some of them are affiliated to the C.B.C., that is, they carry certain programmes supplied by it. In most cases they include school broadcasts as well. This means that their programmes are heard over a wider area through the affiliated stations.

Friday is the day set apart for national school broadcasts, which are heard across the whole of Canada. Duration of most programmes is twenty minutes. The National School Broadcasts have, as a guiding aim, the object of fostering Canadian Unity and interpreting one part of Canada to the rest. Problems of our country are, in a way, very similar to those of Canada—long distances 'provincial patriotism', and variety of languages; and the example of Canada should be helpful to us in our plans of reorganisation and development.

School Broadcasts in Chile

In 1942, Chile was making radical changes in Education. Its traditional systems and methods were being

replaced by more flexible procedures and a new philosophy was inspiring and influencing the content of its curricula. During this period of change and reform, attention was focussed on radio broadcasting and its power of penetration as a cultural and educative force. Nothing in the way of school broadcasts had been attempted before, excepting a few programmes on historical subjects. There were no precedents, no previous experience. The undertaking was not modelled on the organisations of other countries—it was planned to meet the *needs of Chilean education at the time*. It had to contend against numerous difficulties and the radio technique was unknown in the training of teachers.

The task of supervising its educational purpose was entrusted to an esteemed educationist. The first step he took was to give form to the institution by selecting a small group of teachers with valuable teaching experience, artistic sensibility and contact with the world of letters and with the psychological needs and reaction of school audiences.

Then, after a careful study of the subjects to be put across to students through radio programmes and of the possibilities of fusion of radio technique with classroom procedures, a programme was drawn up—interesting but at the same time meeting the requirements of the school syllabuses. Each teacher writing the script for radio programmes was afforded initial experience and training in his specialised task. These script-writing teachers were, then, given opportunity to produce programmes making a well-balanced use of words, sound effects and music.

Educational broadcasts in Chile now cover all branches and levels of teaching—Primary, Secondary, Professional, Technical and Special. In addition to their educational function, another important purpose of these radio broadcasts is to strengthen neighbourly relations with other countries by means of special programmes of tributes on their national days. Every Sunday, there is a programme devoted to the life and work of a man or woman hero, statesman, scientist or artist, who has contributed in one way or another, to the greatness and prosperity of the New World.

One of the major preoccupations of the Radio school is the discovery of a 'Radio Teacher', for upon his talent and

broadcasting skill depends the success or failure of the work. It selects and trains staff in order to have a team of script-writing teachers of high skill and calibre.

All India Radio is also keen to build up panels of script-writers in each station and has been organising workshops for broadcasters and script-writers. For the success of the school broadcasting service it is necessary to discover and train talent. The quality of programmes ultimately depends on the competence of producers, the imagination and writing skill of script-writers and the availability of trained voices to act the parts.

School Broadcasts in the U.S.A.

Probably no other educational tool of similar potential has ever been offered to the American teacher with so little pressure or assistance to encourage its use. All the same, school broadcasting has become a respected, effective and accepted resource in the public schools of the United States. Education is served by both commercial and educational broadcasting stations. Educational institutions were prompt to apply for licences to operate broadcasting stations in the early days of wireless telegraphy. In 1925, radio-telephone broadcast licences were held by 128 educational organisations. Most of the licences were for a period of less than three years.

School broadcasting in the U.S.A. developed very fast in the thirties. The first network series prepared and broadcast for classroom use was the national Broadcasting Company's Music Appreciation Hour. Another of Radio's most significant early contributions to classroom teaching was the 'American School of the Air'—a service of the Columbia Broadcasting System. Daily programmes were offered in such areas of study as science, music, history, literature and current events. A high standard of production, and a conscientious effort to gear programmes to curriculum made the 'American School of the Air' popular with teachers. Typically, a school of the air schedule was the product of planning or production organisation which depended in part or entirely upon commercial stations for the dissemination of its series of broadcasts. Other public school systems utilize local commercial stations to present more less regular broadcasts to classrooms for instructional and public relations purpose. Commercial companies,

too, have been offering programmes of interest and value to school audiences.

School broadcasts in the U.S.A. are supported by tape-network and loan services. But educational stations are still the mainstay of school broadcasting. Air time sufficient to accommodate all school programmes, for which there is a significant demand, is normally available. The public school stations are primarily concerned with teaching and enrichment programmes for use at the public school level. Usually a station operates from 9.00 A.M. to 3.00 P.M. or 3.30 P.M. offering a continuous schedule of programmes directed to certain grade levels and related to specific areas of subject-matter.

The National Association of Educational Broadcasters, an organisation which brings together people engaged in like pursuits, keeps a steady watch on the trend and progress of school broadcasts. It conducts research, the results of which are made available to members. In 1956, the Research Committee of the Association found that member organisations were supplying 860 educational programmes per week to commercial stations.

The Challenge of Television

Sound broadcasts, though, at the moment, under a strong challenge from television, have some obvious advantages and can be trusted to defend their position. In the expanding pattern of educational broadcasting in the United States, the School Radio Service has, behind it, a record of hard-won and important accomplishment and it will neither be possible nor wise to dislodge it from the position it has established for itself in the world of education. Sound broadcasts are a powerful instrument for stimulating the imagination. Words, effectively uttered, word pictures, sound effects and music are the cues that call forth the most vivid images in the mind. It is a near hopeless task for television set designers, make-up artists, lighting technicians, property men and actors to create a "Treasure Island" or an "Alice in Wonderland" as rich and satisfying as the imagery in a young listener's mind as he listens to the story. Literature, poetry, music and art will do the most for a child's development when there is maximum opportunity and challenge at once for mind and imagination.

School Broadcasts in Netherlands

The first attempt to organise education by radio in the Netherlands dates from 1929. It was the subject of a lively discussion at the time between educationists who did and did not agree on the advantages and potentialities of the school radio.

The Second World War interrupted the growth of education by radio, but a start was, again, made with regular transmissions in 1948. At present some 1250 schools are making use of these programmes, which total five broadcasts a fortnight or 125 minutes of broadcasting time. One series of broadcasts is combined in the class with the projection of films. The programmes accompanying the film are supplied to schools at cost price. The teacher shows the films to the class while the radio supplies the commentary.

In a slightly modified form, and on a smaller scale, the regional school broadcasting services of A.I.R. endeavour to achieve similar coordination of the broadcast with the film. Programmes are deliberately and purposely related to the subject-matter of educational films in the State and the Central libraries, and the guiding teachers are expected to relate the picture to the programme-content.

School Broadcasts in New Zealand

The growth of school broadcasts in New Zealand reveals yet another use to which the service can be put. In 1922 New Zealand established a Correspondence School of the Air for an estimated fifty children of lighthouse keepers, shepherds and others similarly isolated. In the intervening years, the school has developed both in numbers and scope far beyond the original intention. It is now a school of some 1,300 Primary and 500 post-Primary full-time remote and handicapped pupils, with some 2,000 part-time students preparing for various examinations or seeking proficiency in certain subjects. It has a staff consisting of a Headmaster and a Deputy Headmaster and 110 well-qualified teachers and forty administrative officers.

The main concern of the school, however, is with full-time pupils, to provide for them curriculum and range of interests and activities in line with those enjoyed by pupils of ordinary schools. Limitations of the arrangement have

been squarely faced and accepted only as so many obstacles to be overcome. The staff have developed a variety of devices and auxiliary services to make opportunities for correspondence children comparable with all that the classroom has to offer.

The Radio has, now, established itself as an effective medium for instruction in music and the languages. All India Radio, too, has initiated programmes directed to a similar purpose. Programmes on Good English and Good Hindi are intended to give to listening schools opportunity to listen to cultivated voices and effective performance.

This rapid survey of the position of the School Broadcasting Services of various countries will show the vast possibilities of employing the radio medium to bridge some of the obvious lacunae and to remedy defects in our educational system and of making education as much a source of pleasure as of profit.

APPENDIX A

SCRIPTS OF PROGRAMMES ILLUSTRATING DIFFERENT FORMS OF PRESENTATION

WOOL IN AUSTRALIA

A PROGRAMME FOR SCHOOLS IN INDIA SPECIALLY
PRODUCED BY THE AUSTRALIAN BROADCASTING
COMMISSION

SCRIPT BY RICHARD ASPINALL

Narrator: Between the Indian and the Pacific Oceans lies one of the great wool producing countries of the world—Australia. Its rolling plains and downs, beneath the sunny skies of the Southern Hemisphere, carry nearly a hundred and thirty million sheep; and from those sheep comes half the world's supply of wool. But, 150 years ago one could have searched the whole vast Australian continent and found not a single sheep. Let us go back in time to find why Australia became the foremost producer of wool in the modern world.

Fx : Music up and slow fade away

Narrator: In the year 1790 the Australian colony was only two years old. It had been founded as a settlement for convicts from England. For two years a thousand men and women had been living half a world away from their homes and cut off from all civilization. The tiny settlement was a collection of huts and tents made from splintery bush timber and rotting dockyard canvas. This forgotten little world ranged itself around a sea-water inlet on the east coast of a continent peopled only with primitive native tribes and strong animals like the hopping kangaroo and wallaby and the tree-bear known as the koala.

Fx : Fade in as background bush sounds, particularly Kookaburra and also the sound of axe at work on timber

Narrator: The thousand men and women worked as best as they could to carve a toehold for themselves on the edge of the vast emptiness, their puny efforts mocked by the kookaburra—the laughing jackass.

Fx: Sound only for a moment or two

Narrator: A few scraggy sheep brought from South Africa grazed around these huts of the first Australians. Some cows brought by the same ships which brought the settlement, chewed the unfamiliar grasses. But cows and sheep and men and women all looked drawn and haggard . . . and starved.

Cockney: . . . twenty-four months we've been here and there's no more food to eat than we brought from England!

Irishman: Look at this! They call it a week's ration for a working man! Two pounds of bread more weevils than flour. Two pounds of rice so old the grains break in your fingers. Two pounds of salt pork more fat than lean! Cursed be this country and its rank and rotten soil. . . it's no good for man nor beast!

Narrator: For months past the settlement at Port Jackson—as they named the sea-water inlet of the Pacific Ocean—had been working its way to a standstill. It looked as though Australia was doomed from the outset. Even the Governor, Captain Arthur Phillip, could see little hope.

Phillip: No country offers less assistance to its first settlers than this does and what I've been given to save us all from famine is worse than useless. . . the axes, spades and shovels are made from soft metal and rotten timber. What we need most is a farm, but the soil is too unfriendly to grow even a vegetable worthy of the name.

Narrator: When the Australian colony had reached its darkest days of despair, and famine was no threat but reality, a fleet of sail appeared on the horizon. It was the sail of a second fleet of transports and ships. . . ships bringing fresh supplies and less emaciated labour.

Fx: Muffled cheers heard in the background

Narrator: The sight of so much sail gave new spirit and life to the first settlers, who had been cut off from civilization for two and a half years. But, their cheers were hardly heard by one military officer, on board one of the ships, who was seeing Australia for the first

time. He could only think quietly to himself as, after eight months at sea, he reached a land whose history and destiny he was to shape. His name was John Macarthur, a young man from the county of Devon in his early twenties. . . .

Macarthur: It's not a pretty prospect that the land makes as you sail in. The timber and canvas homes are far from pleasing to the eye and the forest timber while it makes a fine show of green, looks to be starved of water and shrivelled under a fierce sun. But it's land!

Narrator: This man, this John Macarthur, a captain in the New South Wales Corps BELIEVED in land—a fierce, tenacious belief which within a few months of his arrival brought him into argument with Governor Phillip. . . .

Phillip: . . . I appreciate your views, Macarthur, but there's nothing I can do to help you. My orders from the government in London are strict and that's all there is to it!

Macarthur: But London's half a world away, Sir, and I don't ask for much . . . just a handful of acres and convicts to clear them.

Phillip: No, Macarthur! I cannot grant you land. My orders are to grant thirty acres as I see fit, to suitable convicts and fifty acres to a private soldier, but I cannot grant land to a commissioned officer. Now, if you will please leave me. (*Fading*) I have a lot to attend to. . . .

Narrator: John Macarthur was not a man to be put off: And as luck had it Governor Phillip was shortly replaced, and a new Governor brought new orders allowing him, at his discretion, to grant a hundred acres to each officer in the New South Wales Corps. Macarthur took up his grant . . . to the amusement of his fellow officers. . . .

Cast: Some bantering laughter fades in

Voice: (Derisive—Slightly Off) That Uniform, Macarthur, makes you *look* like a soldier, but, blow me, if I don't believe you are nothing better than a farmer at heart.

Cast : Joins in joke

Voice 2: A ploughman! *Labourer* Macarthur—not *Captain* Macarthur.

Macarthur: (*Angrily*) You are all idiots! You can laugh now, but when I have made my fortune, . . .

Voice: Hah! Fortune! From farming? . . . ?

Voice 2: What do you plan to do with the land, Macarthur?

Macarthur: (*Serious visionary*) What do I plan to do with it? . . . clear it . . . take out the rotten forest and splintering trees . . . let the grass grow up . . . and breed SHEEP!

Voice: Huh!

Macarthur: (*Quickly*) Go on—laugh, by all means . . . but I know that sheep can prosper here. Not sheep as in England where it is green and well watered . . . but sheep like those of South Africa and Spain and Greece . . . sheep that have to graze hard for a poor living and under a hot sun and that's where the best of fleece comes from . . .

Voice 2: (*After Pause—Perhaps Impressed*) D'ye know, lads, I think Macarthur is serious

Narrator: He was. The young captain of the New South Wales Corps knew what he was about. But it was several years before he could prove it. Macarthur—founder of the wool industry in Australia—was a quarrelsome and fiery man. He got land all right, first one hundred acres and then another hundred acres. He struggled with one breed of sheep after another ordering them from the Cape of Good Hope and from Bengal in India. But, then, just as things were going well for him he fought a duel with his commanding officer. A court of inquiry found the case proved against him.

Voice: (*Court—Like Stern—Off*) Captain John Macarthur. In the view of this court of inquiry, you are guilty of insubordination and abusive behaviour to a senior officer. You will therefore make yourself available

to sail by the next vessel bound for England to stand trial before a court-martial.

Narrator: It was a sorry, though petulant young man who sailed back to England. His land-grants in Australia were still his, but should a court-martial find against him then he would have no future at all. It was land and sheep and Australia that were on his mind as he reached England to stand his trial. In London a friend arranged for him to meet Lord Camden, Secretary of State for Colonies and there was probably no more fateful meeting in his life than this.

Camden: Why is it, Macarthur, that you are constantly bickering and arguing with the Governor at Port Jackson and the Officers of your Corps?

Macarthur: It might be in my nature, Sir, but I think it's more because they are fools!

Camden: Because they do not agree with you?

Macarthur: Yes M'Lord. They do not see what I see.

Camden: What do you see, Macarthur?

Macarthur: Land, Sir, land. I know that here in England there is no high opinion of the worth of Australia, but that is the unfortunate debt of the early settlement. A thousand half-starved convicts and marines are no way to start a nation.

Camden: How would you see a nation started?

Macarthur: By granting land to those who can make it produce.

Camden: Ummm. . . . but I understand you were granted two hundred acres.

Macarthur: Yes, M'Lord, but in Australia that is not enough. In that continent there must be tens of millions of acres. I know it's land with little water and the most wretched of natural grasses, but that is all you need for breeding sheep. (Pause) Lord Camden, may I ask you something?

Camden: Yes.

Macarthur: If I am acquitted by this court-martial, I will return to Australia. Could I hope, when I go back, for a letter from you to the Governor authorizing him to grant me five thousand acres of land?

Camden: Five thousand acres!

Macarthur: Yes, Sir. Five thousand acres. You know, nobody better, that England is hard pressed for wool at this time.

Camden: It is.

Macarthur: You are at war with Napoleon. Nothing can come from Europe to England. The wool that you used to get from Spain and Saxony....where is it? Still in Spain and Saxony, not in England. But, give me five thousand acres of land, and in twenty years I will send you more wool from Australia than ever came from Spain or Saxony.

Camden: Well, I....

Macarthur: Five thousand acres.

Narrator: Impudent or dreamer? Macarthur was acquitted and he did return to Australia, with a letter from Lord Camden granting him five thousand acres of his own choosing and the promise of another five thousand, should he succeed in making good use of the first.

But Macarthur did not return only with a letter of land grant. He took with him five rams and one ewe from the Royal Merino Flocks of King George—reputedly the finest sheep in the world. And these prize sheep, destined to found the wealth of Australia, were placed aboard the ship “Argo” and sailed from England. Home again in Australia and settled on his first land grant named “Elizabeth Farm” John Macarthur began the cross-breeding of a strain of sheep ideally suited to Australian conditions.....those conditions of little water, sparse grasses. He bought ewes from Bengal, India. Then two Irish ewes and a young ram from a ship which unexpectedly put into the Cove: then he purchased twenty merinos from
100 M of Edu.—7

the Cape of Good Hope, and gradually by crossing these various breeds, he developed a strain of sheep which could stand up to Australian conditions and which had a lighter carcase, but more and better wool. And so, slowly by experiment and cross-breeding, John Macarthur—installed now on his large grant of ten thousand acres—began the development of a prize strain with a truly golden fleece... the Australian merino. In 1807—seventeen years after his arrival in the colony for the first time—he shipped to England the first bale of wool ever to leave Australia. It was offered for sale at Garreway's Cofee Place at Cornhill, London....

Auctioneer: Now—Now what am I to bid for this trial shipment from the end of the earth? What am I to bid?

Voice: Nine and six a pound!

Auctioneer: Come along gentlemen, it's a better wool than that!

Voices: Nine and seven. Nine and nine. Ten shillings. Ten and a penny. Ten and two! (*Pause*) Three.....

Auctioneer: Ten and three, any advance on ten and three?

Voice: Ten and four!

Auctioneer: Sold at ten and four a pound, a bale of wool from John Macarthur's estate in Australia!

Narrator: John Macarthur had proved the cynics wrong. Given land in large enough estates, given a man of his vision and his tenacity; given the right breeds of sheep, Australia could ride to fortune on a Golden Fleece. Could and did. By eighteen forty his wool was bringing fifteen shillings a pound on the London Market and..... just as important. ...others were following his example, taking up large estates and....

Fx: Sound of Sheep in under

Narrator: (*Continuing*) shepherding their fledgling flocks over the whole wide expanse of the

Australian continent. And the flocks grew in size..... from a scraggy half dozen at the first landing to a thousand, fifty thousand, a million....reaching to the heart of the continent and the semi-desert lands, two million, twenty million, a hundred million....today....a hundred and thirty million....and within these flocks some of the finest sheep in the world!

Ex : Sound fades into music

Narrator: That is the story of wool and Australia. In a hundred and sixty-nine years an Industry without parallel in the history of the world and of man has grown from the vision of an argumentative twenty-three year old military officer who looked at the Fifth Continent and in it saw land for sheep. Land not too well watered, and dried with the sun, but land for the sheep with the golden fleece.

Ex : Music to end

HOLY GANGES

A PROGRAMME SPECIALLY WRITTEN AND PRODUCED
BY A.I.R. FOR SCHOOLS IN AUSTRALIA

SCRIPT BY C. L. KAPUR

READ FOR ACCURACY BY J. C. MATHUR, I.C.S.

Announcer: This is All India Radio presenting to schools in Australia a programme on the Holy Ganges.

Signature Tune

Music up and slow fade away

Narrator: Between Australia and Africa, lies, the ancient land of India. On the north, it is bounded by the snow-clad Himalayas. As you move south, the land-mass becomes narrower and narrower, forming a peninsula of immense size. By a series of coincidences, the destinies of India were placed in the hands of the British for close on two centuries. Though now an independent sovereign republic, India is still a member of the Commonwealth of Nations.

This country has the loftiest mountains and some mighty river systems!

Today we propose to take you to this land on a pilgrimage to the holy Ganges.

All the year round, this sacred river attracts tens of thousands of pilgrims from all parts of India. And, on fairs and festivals, their number is beyond computation. Once in twelve years, there is the Kumb Festival, to mark the Hindu New Year, when millions of devout Hindus have a dip in the holy waters of the Ganges.

Rivers are the life-blood of India. They throw up rich alluvium to form fertile basins. Long before the age of railways and road-transport, they linked up towns and made possible internal transport by rafts and boats and even by small steamships. To this day, timber lumbered from forests in the Himalayas floats down in logs and rafts to markets in the plains.

Vagaries of the monsoons and frequent failure of rains make irrigation a necessity in India. And, from times immemorial, rivers have been trained and harnessed to irrigate the vast rich fields thirsting for a drink of water.

Legend and belief, history and geography have given to the Ganges a unique place in the life and thoughts of the people of India. To a Hindu the Ganges is Mother Ganges—the mother of plenty, from whom all draw sustenance and to whom all must return as to a mother. For the ashes of the cremated Hindus from all parts of the world are consigned to the Ganges—there to mingle with the ashes of others of their race and faith, who have died before them.

It is believed that the water of the Ganges keeps ever fresh. It is bottled and canned and taken to all parts of India and to other lands, where Hindus live. The new-born babe must have a drop of it to “purify” his system to begin the great adventure of life; and the dying must have a sip of it to make sure that he leaves his earthly remains clean—purified by the magic of the cleansing qualities of this Heaven-born stream.

Ganges is a mighty river. It flows for more than fifteen hundred miles before it joins the sea. It has a discharge of over two million cusecs. During the monsoons, it is, in places, more than four miles wide. You can hardly see the other bank. You see just a vast expanse of water—an inland sea, as it were.

Enough of the introduction. Let's go to the Ganges. They say seeing is believing.

Guide: How shall we get there? On the magic carpet, of course. Shut your eyes, will you?



**Music and sound of aeroplane taking off—Pause—
Sound of aeroplane landing**

Guide: Well! We are in India and on the banks of the Ganges right where it enters the plains! We are in Rishikesh and not far is Haridwar. They are the two most popular resorts of the devout pilgrims. Rishikesh means Lord Krishna—the Conqueror of Senses, and Haridwar—the Gateway of God! That should give you some idea of the reverence, in which these places are held!

Rishikesh is largely a pilgrims' town. There are rest houses, mostly double-storey brick buildings, where the pilgrims might stay and cook their own food and have their daily bathe in the Ganges and listen to sermons. There are *ashrams*—places, where live mendicants and recluses and learned professors, who have renounced the world, and have taken to a life of prayer and meditation. Hymns from the Vedas are chanted and their echoes peel through the mountain ranges.

Fade in a Vedic hymn—I½ mts.

You have been listening to a Vedic Hymn. Possibly you could not follow the text. But that should not much matter. You could feel the atmosphere resounding with the melody of devotional music. Here in Rishikesh, with soft murmuring of the water and soft breezes rustling through the pines—that “music of the spheres” ever in your ears you feel that you are in another world—a less worldly world.

Let's now go to Haridwar. It is just a few miles down stream! The evening is closing in and we should not lose time. It will take us an hour, may be a little more by road. But we should be in time for the evening prayers.

Haridwar is a town of temples. At twilight, the high priest blows the conch and the whole place bursts into deafening noise of conches, gongs and bells of all types and sizes from the numerous temples on the river-bank. Prayers and incantations are hardly audible—all drowned in the din of gongs and bells.

Arati (Evening Prayers)—2 mts.

It will go on for quite half an hour or so!

In the morning a little before sunrise, we must watch the devout bathers.

Fade in music to indicate nightfall—Pause—Music of the dawn

Bathing in the Ganges is as an act of great spiritual merit. And, they bathe at all hours—morning, evening, noon and night. Pilgrims start the day with a dip in the sacred river. The water is ice cold and the current is strong. From October to June, the water is crystal clear. With the coming of rains, however, it becomes muddy. But, winter or summer, wet or dry, the pilgrims must bathe.

Here is a group of devout pilgrims having a dip and shouting "Glory to Mother Ganges".

Fade in : "Jai Jai Ganga Mai—Jai Jai Gange"

Narrator: We have seen a little of the life in Rishikesh and Haridwar, with the Ganges ever in view from everywhere. Shall we follow the river to its home in the Himalayas? Yes, we will! It will be mighty exciting! We shall have to negotiate narrow meandering footpaths, stony and slippery, all covered with moss and ferns. We shall soon be panting for breath! Going will be hard. We will climb and climb—through tall pine trees and thick under-growth till we reach the bare tops, with nothing but poor grass and stunted shrubbery around. To reach the foot of the glacier, the Gangotri glacier, which is the source of the Ganges, we shall have to scale a height of 18,000 feet. If visibility is good, we shall espy a slight trickle of ice-cold water, limpid and clear, issuing from beneath the icy rocks. It goes tumbling down steep cliffs, entering caverns of ice and issuing forth to catch a gleam of the warmth and light of the sun; and vanishing once again into the darkness of gorges, unvisited by the rays of the sun. For miles you will hear the gurgling of the waters rushing through the gorges, battering against boulders, falling over precipitous rocks and, finally entering the plains at the foot of the Himalayas, where we stand.

Leader and Guide: Hello Boys! We have a nice excursion before us. Are you ready? Arm yourselves with the bamboo sticks lying in front of you. Hill folk call a walking stick the third leg! Are you ready? In

single file please! And don't you be rash! Slow and steady! Let that be your watchword! Slow and steady may not always win the race—but slow and steady will, sure enough, reach the top of the hill.

(Thumping of heavy boots and sound of metallic ends of sticks clanging against stones and boulders; marchers hum an inaudible tune) (Background noises)

Mind you, don't slip! Dig your bamboo sticks well in the ground. Be sure-footed, boys! One thoughtless step might send you hurtling down the ravine.

Marching noises and song!— $\frac{1}{2}$ mt.

(Panting)

Voice I: How far is the glacier? I am afraid my legs won't carry me any further!

Leader: Cheer up! We're almost arrived (*Panting*).

Voice II: Thank Goodness! After all we have reached the source! I am tired and numb with cold! "What is all this, O! We are in a real cloud. I can't see a thing, not even you, who are next to me. But, look, look to your right.

Voice II: What is that dim faint light in the distance getting brighter every moment. O! It is assuming a form—a human form, a feminine form of exceeding beauty! Her flowing tresses, her luminous face, her vibrant lips, her charming eyes! O what heavenly beauty! What angelic face! And it is mumbling something—inaudible and inarticulate! No! She speaks. She is audible. Hark!

Vision of Mother Ganges

The vision speaks

(*A soft and motherly voice with slight annoyance.*)

"Who are you? How dare you disturb me in my meditation in the eternal snows of the Himalayas—my earthly home?

"You profane prattlers! What talk is this of my source? Dare you tear off the mist and mystery that shrouds me? Must you defile my sacred retreat with shoes of leather—and

of cow-hide at that! Tarry! Draw back! You of the earth earthy, don't you over-reach yourselves. Must you know the truth about my descent on Earth? Then, hear it from my lips—the truth, the whole truth and nothing but the truth. You puny mortals, you purblind priers! You, who can never pierce the veil of matter, think, I am water and the more irreverent among you think I am muddy water! I am all this and more! I am proud to be water. Water is life. If you must know more, I am liquid Divinity! I am the waterway to salvation. My Home is in the Heavens! And there, I dwelt for more centuries than I remember or you can count, till the great King Bhagirath thought of bringing me down to earth; and to this part of the earth—to give light and life to the arid and benighted land of Bharat.

“Bhagirath meditated and prayed and did penance to win the favour of Brahma, the Creator. And, he succeeded! In His Grace, the Mighty Brahma granted his wish. And, so I had to leave my heavenly home. I was sent to the earth to serve you mortals! In the celestial heights I was received by Shiva, Lord of the Himalayas. And he held me captive in the felted locks of his sweet-scented hair. Thus, though I left my home, I was still far from Bharat, the country of Bhagirath.

“And the devout king again went into prayer; and prayed and prayed, till Shiva's heart melted and he loosened his hair and let me escape from his blissful bondage. With my pent-up energy let loose I rushed down in youthful glee and may have hurt myself badly, if the great saint Janwahi, the god of glaciers had not held me back in sweet embrace.

“Bhagirath was a persevering man and would not rest till I was in his land and he coaxed the Saint to let me flow in a tiny trickle from the glacier you call Gangotri.”

* * * **Wind blowing hard: the vision vanishes!**

Narrator: And with the last word "Gangotri" still ringing in the echoing hills, the celestial figure faded and vanished and there they were standing beside the trickle of water to which geographers trace the source of the Holy Ganges.

That is mythology! But, like most myths it has in it a hidden meaning. Is it not an allegorical way of explaining the water-cycle? Or, perhaps, it is the first effort to train a river pictorially depicted.

The legendary King Bhagirath has given his name to the Ganges and many still call it Bhagirathi.

Guide: Hello, Boys! It is time we got back to the plains. But, we have left them a long way behind. We must get back quickly. There is lots more to see and explore. So hold on to your sticks and shout "Glory to the Ganges!" They are magic sticks. There you are, gliding! All shouting—"Glory to Mother Ganges"!

Fade in Music

Now, we are back in Rishikesh. Let's see a little more of the Ganges. How shall we do it? Shall we go on a long voyage in a country-boat? That may be rather risky in this part of the river. Look, there in midstream there is a man riding on what looks like the carcass of a buffalo! In fact, he is crossing the river on an inflated buffalo-skin and a little further away you see something like a raft. It is empty kerosene cannisters sealed and tied up together to make an unsinkable raft. That is another mode of riding the rough current.

Narrator: Back in Haridwar, we see on the left something like a bridge! What is it? It is no doubt a bridge. But it is more. It is a weir as well. Here the waters of the Ganges have been diverted into a canal, the Upper Ganga Canal, which irrigates nearly two million acres of land.

The Ganges is not a lone river. It is a mighty river system, scattering alluvium and prosperity along its long

course. It has numerous tributaries and distributaries. A number of canals, besides the Upper Ganga Canal, have been dug from it. There are the Lower Ganga Canal, the Agra Canal and a dozen others irrigating between them a total area of nine million acres. Mostly, it is flow irrigation. But, in places, it is necessary to pump up water to command the fields. There is, for instance, the Ram Ganga pumped canal.

The Yamuna, the Ghagra, the Rapti and the Gandak and the Kosi are its chief tributaries. Allahabad or Prayag is situated on the confluence of the Yamuna and the Ganges. Near Bhagalpur the turbulent Kosi River empties its waters into the calmer waters of the Ganges.

A number of commercial and industrial towns are situated on the banks of the Ganges. Kanpur, Allahabad, Varanasi, Patna, Buxar and Bhagalpur are among the more important. But, if Ganges links up towns, it also divides up the Gangetic basin and we have to have bridges. In its long course of over 1,500 miles, the river is spanned by as many as nine bridges. Bridges naturally hamper navigation. But, even to this day you might see steamers plying up and down the river, if you happen to visit Patna. Some of these steamships have a capacity of 500 tons.

Steam-power propelled the first power craft in India in 1823, when the 89-ton "Diana" sailed with passengers from Kulpi Road to Calcutta on the Hoogly—a distance of some fifty miles. By 1892 a regular fortnightly service had grown up between Calcutta and Agra on the Yamuna, a tributary of the Ganges, joining it at Allahabad. Steam navigation thrived on the Ganges for quite a century. Kanpur was, at one time, visited by so many vessels that it looked like a port. Country boats with sails and oars carried on a brisk trade. In fact until forty years ago steamers used to ply as far as Ayodhya on the Ghagra, another tributary of the Ganges.

With the draining away of the waters by irrigation canals, navigation became difficult. Besides, it could not stand the growing competition of the company railways with guaranteed dividends.

The Upper Ganga Canal taking off from near Haridwar was designed for boats up to a capacity of 37 tons all the way from Haridwar to Kanpur some 213 miles. The construction of power houses has, however, changed the position and the canal is no longer used as a waterway.

In the development plans now being worked out by India thought is being given to the revival of inland water-transport by power craft, and the survey reveals that there would be no difficulty in reviving navigation on the Ganges.

That, briefly, is the story of the Ganges—a mighty river system, with which is interwoven the story of the ancient culture and the resurging civilization of a new democracy. The Ganges irrigates vast areas of rich but dry soil thirsting for a drink of water. It produces thousands of K.Ws of electric power. On it ply rafts and boats and steamers carrying passengers and cargo for miles up and down its long course. You can understand why the people of India call it Mother Ganges.

APPENDIX B

BROADCASTS TO SCHOOLS

HINTS FOR EFFECTIVE LISTENING

General

At the beginning of the term it is wise to discuss radio listening in a staff meeting and to work out a radio schedule for each class, entrusting different series to appropriate teachers.

The same class may not listen everyday, if selective listening is possible. Listening should, however, become part of the day's programme of the school.

Keep a radio log or radio diary in every class.

Interest in listening to school broadcasts can be promoted, if essays and exercises set to the classes are related to the broadcasts.

If the whole class is not interested, those interested may form a club to listen in. Some of the pupils will be more audible and some less. The more audible could help others in picking out the cardinal listening points.

Know Your Programmes

Study schools broadcasts pamphlet and select the series or broadcasts, which will contribute most to the age and grade levels of the pupils.

Know Your Equipment

Test your radio receiving-set early in the term. Then, each day you use it, tune in early and accurately, testing to make sure that you eliminate distortion.

Study Aims and Content

Study aims and content of the series and of individual broadcasts and prepare the class adequately. Have all

visual aids, maps, charts, vocabulary lists ready for display. Excessive preparation is, however, apt to take the edge off the curiosity of the listeners.

Listen in Your Own Classroom

It is unwise to combine classes, or to listen in an auditorium. That impairs the classroom atmosphere.

Use A Listening Sign

A listening sign on the door of the classroom will avoid unnecessary interruptions. It may take the following form:

CLASS FOLLOWING SCHOOLS BROADCAST:

PLEASE DO NOT DISTURB

Training in Listening

Students should be trained to listen. Hearing is not enough. Listening requires close concentration, constant (and of course silent) inquiry and considerable practice. Listening is both a skill and an art. The listener must cultivate the art of picking out essentials. Listening opens up one of the great door-ways to learning.

Note-making while Listening

Note-making while listening adds to the difficulties of understanding. Avoid it, if you can.

Remember the broadcasts are meant to be a guide and stimulus and not a substitute for teaching. It is not a case of 'something for nothing'. The listener must play his part and should be trained to anticipate imaginatively, to recollect vividly, and reproduce faithfully the pivotal ideas in the broadcast.

Success of Programmes

The success and utility of programmes depend on the way the teacher handles them. No rules can be laid down for utilisation of each broadcast. You must just experiment and develop points suited to your own particular requirements.

Each Broadcast is a Three-Part Lesson:

- (i) Preface
- (ii) The Broadcast
- (iii) The conclusion

(i) *The Preface.*—The preface is your thoughtful preparation and will depend on the content of the broadcast and its relation to the work your class is doing. The schools broadcasts pamphlet will give you some guidance. But you alone know the actual needs of your pupils and their capacity to take in ideas and information contained in the programme.

Some Suggestions for Pre-Broadcast Preparation:

- (a) Display maps, charts, diagrams, and pictures which illustrate the broadcast.
- (b) Discuss the main theme of the programme.
- (c) Write out difficult and unfamiliar words and names on the blackboard.
- (d) Put down on the blackboard points which contain the central ideas of the broadcast.

(ii) *The Broadcast.*—The main activity of the class while the broadcast is on is *to listen*.

The class will reflect the interest and sincerity of the teacher: If he does not listen closely, he cannot induce effective listening.

Reduce movements about the room.

Watch your class reactions to determine the most effective use of the programme, and to plan class projects.

(iii) *The Conclusion.*—The conclusion is your effective follow-up. Whatever may be the subject-matter of the broadcast there will be some type of conclusion. *Vary your follow-up activities, so that the class will not feel that they must always answer the same detailed test on every programme.* Too rigid testing often spoils the pleasure of listening.

Listening should be as much for pleasure as for **profit**.

Improving Classroom Acoustics

A great deal can be done to cut down unwanted echoes by treating the ceiling and the walls with acoustic material. See that the radio or the loudspeaker is not directed on hard surface such as glass or plaster. A curtain hung in folds will cut down unwanted echoes from a hard surface. Remember, too, that the more people there are in the classroom the less echoes there will be.

ALL INDIA RADIO
EVALUATION REPORT

.....SERIES

From
Station

Grade
Type of School

N.B.—This form is to be used only for evaluating series.....
Questions are to be answered by placing checks in the appropriate

☐ More than one statement in any question may be so checked if desired.

1. Which statement best describes the commentator's RATE OF SPEECH?

☐ He spoke too quickly ☐ Not too fast, not too slow

☐ He spoke too slowly

2. Which statement best describes the commentator's DICTION.

☐ Clear and easy to follow ☐ Unsatisfactory as a whole.

☐ Some of his words were not clear

3. Which statement best describes the commentator's MANNERS?

☐ Too impersonal ☐ Did not create interest

☐ Students liked him ☐ Warm and friendly

4. Was the Students' INTEREST sustained during broadcast?

☐ Few of the programmes interested them ☐ Majority of the programmes interested listeners

The following topics failed to hold their interest :

.....
.....
The following topics aroused the greatest interest :

.....
.....

5. Did these programmes contain the proper amount of **TEACHING MATERIAL**?

☐ Generally Yes ☐ No. In some programmes too much material was covered

☐ No. In some programmes not enough teaching was included

List such programmes

List such programmes

.....

6. Was the **VOCABULARY** within the comprehension of your class?

☐ No ☐ Yes

7. Comment upon the **MATURITY LEVEL** of the series

☐ Programmes contained too many difficult concepts ☐ Satisfactory

Give examples:

☐ Many topics were beyond students' interest. List such topics:

.....

8. Comment upon the **CHOICE OF TOPICS** in this series

☐ Satisfactory

Not sufficient emphasis on:

Too much emphasis on :

9. What is your **OVER-ALL RATING** of this series?

☐ Excellent ☐ Fair

☐ Very Good ☐ Poor

☐ Good

COMMENTS: Your comments on any aspect of these programmes will be of great value in future planning. You are invited to include these with this report on a separate sheet of paper.

REGISTRATION FORM

FOR

LISTENING SCHOOLS

ALL INDIA RADIO, TRIVANDRUM OR WHICHEVER
STATION SERVES YOUR REGION

To

The Station Director,
All India Radio,
Trivandrum.

Sir,

With reference to your Educational Programmes for schools for the Winter Term I shall be glad if you could register our School as one of the Listening Schools.

The required information is given below:

Name of the school and address

.

Total number of pupils in the school

Pupils in the 8th, 9th, 10th and 11th classes

Description of the receiving-set

Licence number

Extension loudspeakers, if any

Description of the listening room

Teachers handling the broadcasts

Any other point

.

Yours faithfully,

SCHOOLS BROADCASTS LISTENERS' LEAGUE

CONSTITUTION AND FUNCTIONS

1. Every Station having a School Broadcasting Service may form a School Broadcasts Listeners' League.

Members

2. The membership of the League will be open to listening schools on payment of an annual fee of Rs. 10. Every member-school will form a number of Radio Clubs of its pupils. The number of clubs will depend upon the internal facilities in the school, but normally a club may be of the size of one class and thus there may be several clubs in a listening school giving each group a field for organised listening and learning.

3. The Station Director of the Station concerned will be the ex-officio chairman of the League.

4. The Senior Officer-in-Charge of school broadcasting service at the Station will be ex-officio Secretary.

5. The day-to-day administration of the League will be the responsibility of the Station Director.

6. The League will have an Executive Committee consisting of the following:—

(a) Station Director (Ex-officio Chairman).

(b) One nominee of the Director of Public Instruction or the Director of Education of the State served by the Station.

(c) In consultation with the Director of Education or the Director of Public Instruction of the State, the Station Director, will select five nominees of listening schools.

7. If the number of institutional members exceeds two hundred there will be proportionate increase in representation of listening schools at the rate of one for every additional fifty.

Functions

1. The League will establish close liaison with listening schools and through them with Radio Clubs and will invite

suggestions, regarding the thought-content and form of presentation of programmes. Evaluation report blanks will be sent to members to obtain their comments and suggestions.

2. The League will produce folders, pamphlets, picture cards, film-strips and other visual aids and distribute them free or sell them at concessional rates, to members. It will also make recordings of outstanding programmes for loan to schools which have arrangement for play-back.

3. Members will be entitled to the use of literature available in the Station Library on the planning, production and utilisation of broadcasts.

4. The League will open an account with the State Bank of India or with any scheduled bank and the ex-officio Secretary will act as the Treasurer.

5. The account will be operated by the Station Director.

6. The working and accounts of the League will be inspected by the Deputy Director General (Inspection) who will submit report to D.G., A.I.R. on the working and the finances of the League. The Director of Public Instruction of the State will be kept in touch with the working of the League.

Associate Members

7. Teachers, parents, educationists and educational administrators interested in school broadcasts may, on payment of an annual fee of Rs. 2, become associate members of the League. Associate members will be entitled to receive un-priced publications of the League and will also give their comments on programmes, and suggestions and advice for their improvement.

**RULES FOR THE CONSTITUTION OF
CONSULTATIVE PANELS FOR SCHOOL
BROADCASTS FOR STATIONS OF ALL INDIA
RADIO, HAVING A SCHOOL BROAD-
CASTING SERVICE**

Composition

1. The panel will be composed of not more than ten non-official members who will be nominated by the Minister for Information and Broadcasting, Government of India.

2. Members will be nominated by name for a period of two years but will be eligible for re-nomination. The Minister may remove from office any member of the Committee before the expiration of his term of office on the recommendation of or after consultation with the Committee or if the Minister is satisfied that his conduct is incompatible with his position as member.

3. A member shall automatically cease to be a member of the Committee if he/she fails to attend two consecutive meetings unless there be good and sufficient reasons for his/her absence.

4. The Government of the State in which a Station is situated or of a neighbouring State served by the Station, may be invited by the Government of India to nominate an Officer to attend meetings and take part in discussions. Such invitees will, however, not be deemed to be members of the Committee.

5. The Station Director will be the Chairman of the Committee and will preside over meetings. The next senior Programme Officer will act as Secretary. At Stations where there is no Station Director, Officer-in-Charge of the Station will preside.

Meetings

The Committee will meet at least twice a year.

7. The date of the meeting will be intimated to members at least fourteen days in advance.

8. The agenda for each meeting, together with a note indicating the action taken on points arising out of the previous meeting will be prepared by the Officer in charge of the Station and sent to members at least a week in advance of meeting.

9. Minutes of meetings will be prepared by the Officer in charge of the Station and circulated to members after approval by the Director-General, All India Radio.

10. The functions of the Panel will be:—

- (i) to advise the Station Director on Programme schedules of school broadcasts of the Station;
- (ii) to keep the Station Director in touch with school broadcasts listeners' reactions and public opinion generally;
- (iii) to listen in to school broadcasts and offer suggestions in regard to their content, language and presentation;
- (iv) to advise the Station Director on such matters as may be referred to them for advice.

11. Questions relating to individual members of the staff or individual artistes or other matters of a personal or purely administrative nature will not be discussed.

12. For attending meetings of the Committee non-official members will be entitled to travelling and daily allowance.

Miscellaneous

13. Each member and official invitee will be given a free copy of the School Broadcasts Pamphlet and Charts published by the Station concerned.

APPENDIX C

A.I.R. CIRCULARS TO SCHOOLS

GOVERNMENT OF INDIA

DIRECTORATE GENERAL: ALL INDIA RADIO

Broadcasting House,
Parliament Street,
NEW DELHI.

No. 3(8)P-3/56

Dated 10th August, 1956.

MY DEAR

I am writing to seek your co-operation for the full utilization of school programmes broadcast by the All India Radio. There has been so much emphasis on audio-visual education recently that it is hardly necessary for me to stress the importance of education through the radio. I had the privilege of meeting some Directors of Public Instruction at the Unesco seminar on audio-visual education held last year at Lucknow. We had then discussed both aspects of this question, viz. improvement of the programmes broadcast for schools and need for organized listening in the schools.

2. So far as the improvement of programmes is concerned, All India Radio wishes to make the programmes as responsive as possible to the needs of schools and to the advice of expert educationists. You will be glad to know that Sri C. L. Kapur, Retd. Director of Public Instruction, Punjab and the PEPSU, who has had wide and varied experience of education in different phases has been appointed the Chief Producer of Educational Broadcast in the All India Radio. Besides, we are going to appoint persons with practical experience of education and with aptitude for presentation of programmes, as Assistant Producers (School Broadcasts) at different stations. On the basis of experience gained in

regions where school broadcasts have been a success some general instructions to the A. I. R. stations are being issued and it is hoped that after these steps have been taken, there will be uniform improvement in school broadcasts all over the country.

3. Much of this effort will, however, be of no avail if organised listening of these programmes in schools having radio sets is not arranged and if these programmes are not followed up by further discussions in the classroom, group activities, written and oral exercises and occasional assessment of listeners. Whatever be the views on the general nature and value of audio-visual methods of education, it will be accepted on all hands that radio programmes could give to a large number of schools that are not fortunate in having teachers of uniform ability in all subjects, the facility of lessons and talks by some of the best teachers and authorities on these subjects. Likewise, it will perhaps be conceded by all that carefully planned and presented radio programmes for schools do make a difference to the general knowledge of pupils, so important in present-day education. Thus, there is a strong case for treating school programmes as an integral part of the regular studies in schools. In any case, listening and follow-up discussions of school broadcasts could be treated as part of social studies and general knowledge studies of the pupils and could be taken into account at the time of annual promotions and assessments.

How exactly this should be done will depend upon the conditions in different States. I shall be grateful if you could consider the following, among other, suggestions:

- (a) Instructions may be issued to heads of schools to the effect that school broadcasts may be treated as a regular item of school routine and not merely as an extra-curricular activity.
- (b) Wherever there are radio sets, organized listening may be ensured by drawing up a time table so that by rotation (or through internal relay system) classes might hear programmes under the guidance of teachers. Even where class-wise listening is not possible, radio clubs could be formed and credit could be given to the regular members of such clubs for the progress shown by them as a result of regular listening

of the programmes. For every such club there should be a teacher-sponsor.

- (c) School managements could be asked to give allowances to teachers in charge of organized listening by pupils, just as allowances are given to drill-masters, scout-masters, teachers-in-charge of first-aid, etc.
- (d) Short training courses might be arranged at schools and colleges with the assistance of the local Station Director of the All India Radio and the Director, Staff Training School, A.I.R., New Delhi. At these courses, selected teachers could be given an idea of the techniques of school broadcasts and teaching through audio-visual aids.
- (e) The programme to enable schools to own radio sets for educational purposes may be speeded up and attempt may be made to encourage every High or Higher Secondary school to have a set.

Knowing, as I do, your interest in modern methods of education I have ventured to offer these suggestions and I shall look forward to having your reactions. Since the A.I.R. is spending a considerable sum of money over educational programmes you will appreciate our anxiety to see that the expenditure is justified by the extent and manner of listening in educational institutions. The Chief Producer of Educational Programmes, Shri C. L. Kapur, will continue to be in touch with you and will also be writing to you from time to time.

Thanking you,

Yours sincerely,

J. C. MATHUR.

To

All State Directors of Public Instruction and Directors of Education.

GOVERNMENT OF INDIA

DIRECTORATE GENERAL: ALL INDIA RADIO

No. 8 (14)/58 P-3

Dated New Delhi, the 17th February, 1958.

DEAR

You would recall that at the closing session of the meeting of the Central Advisory Board of Education on February 7, 1958, I had the privilege of speaking to the members about (a) the need of ensuring better and organised listening of school broadcasts and (b) action to be taken for watching and improving the standards of training and education in music.

2. Encouraged by the attention which the members of the Board were pleased to give to my brief observations, I venture to write to you now in the hope that the suggestions that I am giving below again, would be acceptable to you and that you would be good enough to apprise me of any steps that you propose to take in the matter.

3. *Better Utilization of School Broadcasts*—On this subject I had proposed that the following steps might be taken by the State Governments—

- (i) The State Governments may in a circular letter impress upon Headmasters of Secondary schools that, if they have a radio set for the school, listening to the school broadcasts of A.I.R. should be treated as one of the principal activities and should not be assigned to the recess or after the school hours. The school schedule should be so arranged that every class may get an opportunity for organized listening to the school broadcasts once a week. The staggering of the school broadcasts for the Middle and High school classes so as to ensure weekly listening, can be arranged in consultation with the local Station Director of All India



Radio. In some regions, listening, twice a week may be more practicable. For organized listening, certain rooms will need to be provided with loudspeakers and earmarked for listening classes by rotation. Also one of the teachers will need to be put in charge of supervision of organized listening and the subject teacher could be asked to attend to the discussions that may follow the broadcast. Schools could also encourage formation of Radio Clubs and the affiliation of the Radio Clubs to the nearest Radio Station.

- (ii) Considering the potentiality of the radio as a medium of education, you may like to suggest to your Universities or Boards, about the introduction of "Use of the radio as a medium of education" as a subject for study in the Training colleges. The Punjab University has already taken a lead in the matter and some other universities are thinking of doing so. At the same time, refresher course for selected teachers from schools could also be arranged in co-operation with the local Station Director of All India Radio and the Staff Training School of All India Radio.
- (iii) Every Station of A.I.R. which broadcasts school programmes has in its possession a large number of scripts of useful educational material, talks, biographical sketches, plays, songs, etc. on various subjects that would interest the child and the school. You may like to consider if a joint publication of some of this material could be possible between A.I.R. and your Publications Department. We could work out the details if the idea is acceptable to you.

4. *Improving and Watching the Standards of Education and Training in Music*—On this subject, I had offered the following suggestions:

- (i) There are several institutions in practically all States which provide training in music. Apart from some well-known institutions in the country, the others are bodies without adequate supervision and control over standards. Some of

these institutions are suspected to impart a very perfunctory kind of training and are in a sense misleading their pupils. It may be considered if the State Governments might not appoint Inspectors of Music Education who could visit these institutions and lay down certain standards and requirements.

- (ii) Examinations in music are conducted not only by properly authorized Music Universities and Colleges but also a large number of self-styled Parishads and Academies over the activities of which there is no control. Cases of bogus diplomas having been awarded, have also come to our notice. Perhaps the State Governments may like to set up separate Boards of Music **Examinations**, or may call upon existing Examination Boards to arrange for centralized supervision of examinations in music.

To the suggestions regarding training and education in music, I wish to add one more. In A.I.R. we have found an increasing tendency on the part of young artistes not to give sufficient attention to classical music. Even in the United States where film music is extremely popular among young people, taste in classical music is promoted by educational institutions through concerts as well as play-back of high class recordings. If such a taste can be cultivated at an impressionable age, the subsequent influence of cheap music is somewhat neutralized. For the sake of preserving the rich tradition of our music, it seems necessary for us to take steps for promoting taste for good music among young people. We would be glad to broadcast special programmes of music for school students if we could be assured that organized listening would be arranged in schools and colleges.

5. I wish to apologise to you for inflicting on you this long letter, but I have no doubt that you would seriously consider these suggestions and favour me with a reply at your earliest convenience. I am asking the local Station Director of All India Radio to keep in touch with you over this matter.

Yours sincerely,
J. C. MATHUR,
Director General.